THE OIL WEEKLY

ENGINEERING « NEWS » STATISTICS

EDITORIAL STAFF

WARREN L. BAKER
Editor

J. KENT RIDLEY
Managing Editor

ASSOCIATE EDITORS

L. J. LOGAN — WM. V. GROSS

DISTRICT EDITORS

B. F. LINZ.....Washington
J. V. HIGHTOWER.....New York
BEN ALTMAN, FRANK TAYLOR.....Tulsa
H. H. KING.....Fort Worth
EARL S. POST.....San Antonio
R. W. BYRAM.....Austin
Z. H. MISCHKA, ELTON STERRETT, GILBERT M. WILSON, GORDON B. NICHOLSON.....Houston

PUBLISHED BY

THE GULF PUBLISHING COMPANY

HOUSTON, TEXAS

R. L. DUDLEY, *President*
A. L. BURNS, *General Manager*
S. W. ROBINSON, *Editorial Director*
TOM W. NELSON, *Advertising Manager*

Staff correspondents at all important points.

Member Audit Bureau of Circulation
Member Associated Business Papers, Inc.

BRANCH OFFICES

NEW YORK.....250 Park Ave.
PITTSBURGH.....Vandergrift Bldg.
CHICAGO.....332 S. Michigan Ave.
LOS ANGELES.....W. W. Wilson Bldg.
Huntington Park, Calif.
TULSA..... Hunt Bldg.
FORT WORTH.....W. T. Waggoner Bldg.
WASHINGTON.....Albee Bldg.

ADVERTISING STAFF

DICK SWINSKY.....New York
C. A. WARDLEY.....Pittsburgh
H. G. FITZPATRICK.....Chicago
J. F. CARTER, JR.....Tulsa
JAY CURTS, JR.....Los Angeles
CHAS. WYATT.....Houston

CIRCULATION DEPARTMENT

J. T. WAGONER.....Manager

SPECIALIZED OIL JOURNALS

Published by

THE GULF PUBLISHING COMPANY

The Oil Man's Calendar

SEPT.	
8–12	American Chemical Society, Atlantic City.
17–19	National Petroleum Association, Atlantic City.
OCT.	
2– 3	West Virginia Oil & Natural Gas Association, Clarksburg.
6– 9	National Safety Congress, Chicago.
9–11	Texas Mid-Continent Oil & Gas Association, Beaumont.
16–17	American Association of Petroleum Geologists, Pacific Section, Los Angeles.
16–18	American Institute of Mining & Metallurgical Engineers, Petroleum Division, Dallas.
20–22	National Stripper Well Association, Tulsa.
20–22	Independent Petroleum Association of America, Tulsa.
30–31	American Institute of Mining & Metallurgical Engineers, Petroleum Division, Los Angeles.
31	California Natural Gasoline Association, Los Angeles.
NOV.	
2– 7	American Petroleum Institute, Annual Meeting, San Francisco.
DEC.	
3	New Mexico Oil & Gas Association, Artesia.
5	Oklahoma Stripper Well Association, Tulsa.

Contents « September 1, 1941

Volume 102, Number 13

The Changing Panorama..... 7

Feature Section:

Oil-Field Equipment Situation Is Serious..... 9
By RAY L. DUDLEY

Washington Roundup.....10
By B. F. LINZ

Emergency Priority Rating Sought by Equipment Men..14

Earnings Run Well Ahead of Those Recorded Last Year.16

Tugs and Barges Used by Industry to Convert Natural Handicaps to Its Own Advantage in Moving Louisiana Oil 17
By GORDON B. NICHOLSON

Derrick Substructure Centralizes Load at Corners.....21

Suggested Method of Measuring Water Input Profile of Intake Wells.....25
By EUGENE P. BOWLER

Practical Operating Hints for the Drilling Rig.....44

Practical Operating Hints for the Production Man.....46

News Section and Index.....51

Looking Ahead With the Editor..... 2
Editorial Comment..... 9
Letters 80
Notes for the Equipment Buyer and User.....78
Squeaks from the Bull Wheel.....77
Index to Advertisers.....80

Published every Monday. Single Copies 15 cents (Special Issues 50c). Subscription price: domestic and foreign, $2.00 a year; 2 years $3.00. Entered as second-class mail matter December 23, 1916, at the post office at Houston, Texas, under act of March 3, 1879. Subscription restricted to those engaged in the producing and pipe line branches of the oil industry or the manufacturing and distribution of oil field supplies. Advertising rates on application.

Copyrighted 1941 by The Gulf Publishing Company.

Attention!

OPERATORS THROUGHOUT THE WORLD

FOR LATEST INFORMATION ON DRILLING MUD AND ITS CONTROL READ BAROID SECTION IN 1941 COMPOSITE CATALOG

Pages 299 to 318 of the 1941 Composite Catalog are complete with latest information on drilling mud and its control. Operators interested in faster, safer and more economical drilling should read this important section.

Always use Baroid Products and Service when you drill a well. They have been *proved* in oil fields throughout the world.

BAROID SALES DIVISION
National Lead Company

Baroid Products and Service Engineers are available in all active oil fields in the U.S.A.

TRADEMARK BAROID OIL WELL DRILLING MUD SERVICE

BAROID SALES OFFICES: HOUSTON • LOS ANGELES • TULSA

The Changing Panorama

American Automobile Not Luxury Item

Survey Shows 95 Percent of Cars Are Used in Essential Traffic

Timely information on the importance of automobile use in the United States is embodied in the lately issued "Automobile Facts and Figures, 1941," published by the Automobile Manufacturers Association.

Figures and charts show that 55 percent of all mileage driven in passenger cars represents necessity use, divided as follows: 16 percent in going to work, 32 percent on business trips, 4 percent for shopping, 1 percent for hauling and to market, 1 percent to school, and 1 percent to church. The remaining 45 percent of mileage driven is in recreational and social activity. Of all trips made, 77 percent are for the necessity uses and 23 percent for recreation, the proportions of trips being high for going to work and shopping.

Of all passenger cars in service, 95 percent are used at least to some extent for necessary purposes. In the urban areas, 59 percent of all cars are used in going to work, some cars carrying more than one person.

While reductions in automobile production ultimately will have the effect of making it more difficult for owners of old, worn-out cars to remain in the car-owning class, such owners use cars relatively more for necessity driving than do the owners of newer cars.

The average passenger car is driven 8139 miles a year, but commercial travelers drive over 18,000 miles and physicians, lawyers, and insurance and real estate salesmen over 12,000 miles.

The smaller cities depend most on private cars for transportation. In going into the central districts, 14.2 percent go by automobile in New York City, 35.5 percent in Philadelphia, 35.6 percent in Boston, compared with considerably higher percentages in many of the smaller cities.

Automobiles are owned on 76 percent of the farms of the United States, and 78 percent of farm-car trips are for necessity uses.

In 1940, total motor vehicle travel in the United States was 292,849 million miles, of which 238,580 million (81 percent) represented passenger car mileage, 52,678 million for trucks, and 1,591 million for buses.

Not Even Absurd . . .

It is to be devoutly hoped that Secretary Ickes was misquoted in something he is reported to have said on the West Coast during his current vacation. He is reported in the newspapers to have said in effect that the entire country ought to share in the difficulties brought about by a gasoline shortage on the Atlantic Seaboard.

If the secretary said this his thinking is so completely screwy as to be sadist. The idea that one part of the country which has a plentiful supply of gasoline, should be rationed because the government has taken away from another section its transportation facilities does not even rise to the merit of being absurd. It is vicious.

Mexico . . .

The next two weeks may bring interesting news out of Mexico. A shakeup in the Mexican ministry seems to be coming, as evidenced by news of the past week. The new cabinet may be far less radical and revolutionary than the one it may supercede. Cardenas, former president, and Toledano, red chief who has already been disavowed by President Camacho, are reported to be forming a new leftist party to oppose the party of which they formerly were members, the party which put Cardenas in power. But there does not seem to be a lot of doubt as to the attitude of most of the Mexican people. Cardenas ran wild with his leftist schemes to the point of bankrupting the country. Some are unkind enough to suggest that some of his close followers have not failed to feather their nests. Most of them should be thoroughly discredited in the eyes of the Mexican people.

Oil-Price Increases Not Out of Line

Over-all Advances Little Below Average For All Commodities

Although oil prices have come under scrutiny because of the government's placing of ceilings on Pennsylvania crude and lubricants, a study of price statistics shows that advances for the industry as a whole have been closely in line with gains for commodities in general.

The Department of Labor's index of wholesale prices of 887 commodities rose to 89.6 (percent of the 1926 average) in the week ended August 9 from 89.2 the previous week. The new figure of 89.6 compared with 88.1 a month before and with 76.9 a year previously, an increase of 16.5 percent within the past 12 months.

The average price of crude oil has increased a little less than that general advance, the Department of Labor's index taking into account an Oklahoma-Kansas price at the wells of $1.11 a barrel in July, 1941, compared with 96 cents in July, 1940, a 15.6 percent increase. The tank wagon price of gasoline (at New York) was 14.9 cents a gallon in July this year, against 13.0 cents in July last year, an increase of 14.6 percent.

Refiners were realizing comparatively low prices for their products at this time last year, following several months of declining market values; and the improvement in refinery prices since then has been a little above the gains in crude oil and in tank-wagon prices to dealers. The price of gasoline at Oklahoma refineries averaged 6 cents a gallon in July, 1941, compared with 4.8 cents a year previously, an increase of 25 percent. Water-white kerosene, 47-gravity, at Pennsylvania refineries was up 18 percent, to 5.9 cents a gallon from 5.0 cents. Cylinder lubricants at Pennsylvania refineries were up 18.6 percent to 14 cents a gallon from 11.8 cents. However, Pennsylvania prices are up more than average for the industry, because of excep-

tional demand caused by the defense program and the shortage of tankers.

Prices to Rise Gradually . . .

A substantial further increase in the general level of prices is anticipated by the Bureau of Agricultural Economics. But no runaway price inflation is regarded as likely, at least for the time being, despite a growing inflationary psychology. For the influences pushing prices upward will be offset in part by various factors, including the fact that the high farm-loan program and the shipping shortage are already reflected in prevailing prices and the prospect that business men henceforth will be less inclined to bid up prices in attempting to insure adequate supplies or for protection against future price advances, in view of the fact that legislation now in process would authorize formal price fixing for industrial commodities and conscription of industrial inventories.

Continuing to push prices higher, however, will be the abnormal situation in which consumer purchasing power will be great, while supplies for purchase will be limited.

Oil Shares . . .

Oil-company securities have fared better than average during the first two years of the war. A recently compiled tabulation showed that in the two years since August 31, 1939, the day before the German invasion of Poland, the Dow-Jones averages showed the following net changes: a 9.36 point decline in industrial stocks, a 6.23 point decline in utility stocks, and a 3.75 point rise in railroad stocks. The stock of the world's largest oil company, Standard of New Jersey, showed for the period an increase of ½ point.

The relatively good showing by oil company shares reflected their above-average performance in recent months, during which there was substantial improvement in oil prices and earnings. Interest in oil shares probably has been stimulated lately, by the inflationary psychology and the attendant opinion that the oil securities would constitute hedges against inflation, by affording shares in tangible properties that would go up in value along with all other prices.

Killing Business . . .

If the senseless slaughter of small American business firms as a result of the administrations cautionless procedure is not stopped, we predict that Secretary Morgenthau's estimates on the return from income taxes on 1941 national income, will be found to be too high. These firms may not be laying large golden eggs, but they have been laying a sizeable quantity of small silver income tax eggs, and a dead goose lays no eggs.

South American Loans . . .

Not long ago the United States government was reported to be flirting with the possibility of a heavy loan to Argentina which would finance a pipe line from Buenos Aires to the Mendoza field. The amount ran into millions. Despite the talk on the matter, apparently the proposed loan never had an official status in that no application for it was made. This, at least, is the information developed by THE OIL WEEKLY in Washington. Recent news dispatches said that Argentina now appears in the role of lender to Bolivia which needs additional funds to develop its nationalized oil industry. The reports said Argentina had loaned Bolivia $467,000 to be used in oil development.

Time for Facts . . .

"Nothing contributes to fear and hysteria so much as a lack of confidence in information coming from sources on which we are forced to rely," says Frank Buttram, president of the Independent Petroleum Association of America, in a signed editorial in the August issue of the Independent Monthly. Continuing, Mr. Buttram says:

"When we find information coming from sources of authority that obviously lack truth in regard to small matters, our confidence in more important matters is destroyed. From lack of confidence we go to uncertainty, from uncertainty to fear, and from fear to hysteria and chaos.

"No one needs to lack truthfulness to further our program. The splendid committee appointments place at the disposal of the government the services of outstanding representatives of a very efficient petroleum industry. The facts are available. The American people neither need to be coddled by sugar-coated truth to allay their fears nor incited by hysterical statements to stimulate their patriotism. Given the facts, America will respond with confidence.

"The English people withstood the harrowing battle of London because they were prepared for the worst by a frank statement of the condition confronting them. Our own civilization has thrived best on realities. Nothing is more irritating to a real American than to have some one in authority try to kid him.

"The philosophy in the old McGuffey Reader of the danger of calling 'Wolf, Wolf' is generally accepted by our people. It has found later expression in a more recently developed colloquial as 'Don't kid us, big boy.'"

Finding Pipe . . .

Shortage of tubular goods, combined with revisions of existing pipe lines for two-way or reversed flow, has led to reclamation work in fields which, in some instances, is causing greater ditching activity than that during expansion days in the same field.

In the East Texas field many companies are salvaging buried lines which have carried no (legal) crude since 1934, and are reconditioning this pipe, welding pits and blisters and wrapping to inhibit further corrosion, and using it on field lines, loops in transmission systems and even using it for casing and tubing requirements. One small area, literally gridironed by lines during the early days when the field admitted to sixty-odd refineries, has been so thoroughly dug up that it is now possible for an electrical finder to trace active lines from one fence to the next without the readings being distorted by intervening and divergent lines.

Estimates of the useful life remaining in such pipe runs from 75 to as high as 90 percent of the initial life of unprotected pipe, and to the equivalent of new in those few lines adequately protected at time of laying.

One company, salvaging line to a former loading rack, found an 8-inch main paralleling its pipe, slightly over 1000 feet of pipe, open at both ends and with no visible connections being exposed as the company line was uncovered. No records exist, so far as can be determined, showing ownership, use or even time of laying this "orphan line."

Oil Field Equipment Situation Is Serious . . .

By RAY L. DUDLEY, Publisher

AN ACUTE prospective shortage of many vital materials used in the manufacture of oil-country equipment and in equally vital oil-country services, was revealed when equipment and supply men met in Fort Worth last week. We do not believe that the oil industry realizes the seriousness of the situation.

Fortunately for the oil men and the equipment men as well, Robert E. Allen, Director of Production in the Office of Petroleum Coordination, is a practical oil man as well as a member of Coordinator Ickes' staff, and he and the equipment men both talked language the other could understand.

While a plan was evolved which everyone hopes may solve the emergency problem temporarily, a long-range plan for next year must be developed. If the suggestion for action does not come from the Coordinator's office immediately, it should come from the oil industry itself. On this subject we have been harping until some people have felt that we were obsessed with it. Others have said that we were simply thinking of the interest of those with whom we do business. Actually, we have realized that the plight of the equipment man is also the plight of the oil man as well. We have felt that one of the reasons for chaos in the general defense plan is lack of long-range planning, and have reasoned that if the oil industry does not get busy and make sure of equipment next year, it will be in a sorry mood several months from now.

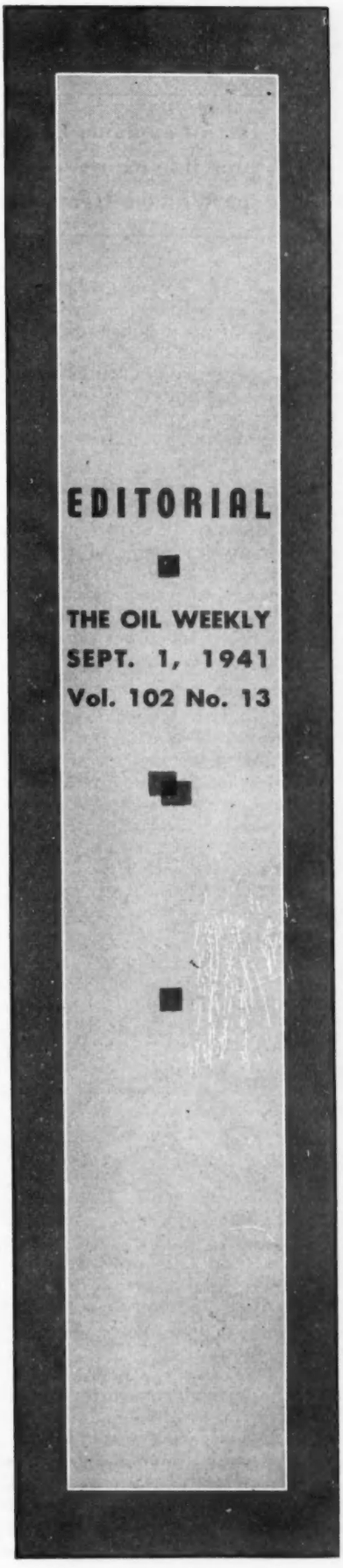
Allen, in a talk he made at Fort Worth referred to the Nation's acceptance of the oil industry's statements as to its preparedness . . . later he asked the question, "Is it safe to say that the producers of petroleum can at all times supply the needed oil?"

If the oil industry does not make it known that it cannot supply the necessary oil at all times unless it is furnished with equipment, it is the fault of the oil industry. Most statements as to what the oil industry could do have been made on the printed or spoken premise of normal drilling.

Yet there are those who listened only to what the oil industry said it could do, without paying any attention as to the basis of its doing the job. If anybody has spoken out of turn and indicated that the industry can supply all requirements without drilling or buying pumping equipment, it is time that the industry itself, or spokesmen for it, set things right.

The job of figuring next year's requirements is not a difficult one — it is merely tedious, and it calls for some cooperation. The manufacturers stand ready to do everything they can. They are close to the gun and know what is about to happen.

The industry is fortunate, we feel, in having a man of Bob Allen's known experience and ability as Production Director under Secretary Ickes. But he is no superman, and guesswork as to what will be absolutely necessary has no place in the picture if reasonable estimates can be used.



Washington Roundup

Davies explains East Coast oil famine to Senate committee . . . Opposition to pipe line expressed by Maritime Commissioner . . . Pooling of tankers ordered for Western Hemisphere . . . Halt called on close drilling in developed areas

By B. F. LINZ, Washington Correspondent

THE opening of hearings before a special Senate committee appointed to investigate the East Coast oil shortage was the feature of a week marked by considerable public outcry over the restriction of gasoline supplies.

Designed to develop the truth of claims that there were sufficient railroad tank cars available to take care of the situation, the investigation was planned to bring out as many of the facts underlying the shortage as possible in open session and, behind closed doors, to secure information on the diversions to England of a large number of tankers and the use made of those and other oil ships by Britain.

During the week, the Maritime Commission and Coordinator's office tightened up on tanker operations and prepared for the pooling of ships — but under private control — through the creation of a special board.

Another feature of the period was the striking out by President Roosevelt at reports that England was bending the lend-lease program to her own purposes.

The oil administration, apparently shooting at Illinois and California, called a halt to further close drilling in developed areas, but announced that wildcatting would be encouraged.

Hearing

Moving with unusual celerity, the Maloney resolution for an investigation of the Eastern shortage situation was approved by the Senate commerce committee on August 26, giving approval of a $12,500 appropriation for expenses by the Audit and Control Committee August 27, and passed by the Senate August 28 less than two hours after hearings had been opened by a commerce subcommittee.

The investigational measure was the subject of rather unusual procedure when taken up by the commerce committee, in an effort to get the probe under way promptly.

The committee not only approved the resolution, but appointed a subcommittee which it instructed to open hearings immediately.

The subcommittee, headed by Senator Maloney of Connecticut, and including Senators Radcliffe of Maryland and O'Daniel of Texas, Democrats, and Burton of Ohio and Barbour of New Jersey, Republicans, opened its hearings at 10:30 Thursday; two hours later, the members were named to comprise the special committee called for under the resolution.

The investigation had the support of Republicans in the Senate as well as Democratic members of the non-intervention bloc. It also was urged by outside interests, including the American Automobile Association which said the study "would serve to bring about what is sorely needed, namely, a clear statement of the facts in the interest of public understanding."

At the opening of the hearing, Chairman Maloney explained that the investigation was not designed to develop an attack on the Administration's efforts to deal with the oil situation but, rather, to bring out facts which might improve the efficiency of the machinery.

"This investigation is not intended to be in any way hostile," he said. "It just so happens that all of the memers are in sympathy with the Administration's policy on the question of aid to England and the democracies.

"We do not intend that this investigation shall in any way hamper the lend-lease program or the government's defense program."

Davies on Stand

The greatest efficiency an efficient industry ever displayed was called for at the opening of the hearings by Deputy Coordinator Ralph K. Davies, first witness to be called by the committee.

Davies outlined the causes of the Eastern shortage — without revealing the number of tankers transferred to Britain; enumerated the steps taken by the oil administration and other agencies; discussed the various reports which have been circulated, charging Coordinator Ickes with attempting to frighten the public and with withholding facts — suggesting the possibility of a definite effort in this way to sabotage the defense program — and disclosed the hope that a 10-percent curtailment in total consumption of gasoline will meet the situation.

He made his presentation in the form of a 50-page statement, during the reading of which and afterward he was closely questioned by members of the committee. In that statement he took up in order the three problems under investigation — the shortage, methods that are being used to provide deliveries for consumer use, and the most effective means for insuring an adequate supply for national defense without undue hardship to business and consumers.

It was in connection with the last that he called upon the industry to exert every effort to meet a situation which, he had indicated earlier, might spread to other sections of the country.

"The petroleum industry, in common with every other basic industry, now faces a supreme test," he said. "That test is this — and it is an enormous task — how can it produce, refine, transport and distribute more and more oil with the use of less and less steel, alloys, metals and other critical materials and services now demanded by the

Army, Navy and critical defense industries.

Questioned by Committee

Davies was questioned at length by Senators Maloney and Burton regarding the possibility of meeting the situation by the use of tank cars, and the Ohio Senator also explored the possibility of overcoming the shortage by securing 50 additional tankers, either by return from Britain or by construction.

The deputy coordinator admitted that if there were 20,000 tank cars available they might be able to bring in the 200,000 barrels of oil a day which is necessary, and also that 50 tankers could do the job, but said he had not been able to find the railroad equipment which it is claimed is available.

He refused to discuss the British tanker situation, the use they are making of tankers or the transfer of American ships, in open session, in which he was upheld by the chairman.

Answering a question by Senator Burton as to whether the completion of the four pipe lines now proposed would clear up the shortage, Davies said "assuming that there is not a further loss of tanker facilities, the shortage is coming to an end in the spring." He qualified that statement, however, by saying that completion of the pipe lines depended upon the ability to get the necessary steel.

Senator Burton expressed concern over the eventual fate of the pipe lines after the emergency, when tanker operation is resumed, Davies saying that the companies had given that much thought before embarking on the construction program.

"Tanker transportation is undoubtedly cheaper, but how much cheaper remains to be seen," he told the Senator, "and it remains to be seen what charter rates will be at the end of the emergency and if there will be a surplus or a shortage of tankers, etc. If the pipe line is uneconomic at the end of the emergency, and there are sufficient tankers, there is a prospect that it might be converted to a products line, or to a natural gas line, and we have the feeling that it will not be obsolete at the end of the emergency."

He said also that there is a possibility the government might wish to retain the line as a defense facility after the emergency.

The proposal for a products line to parallel the crude line from Texas to New York, has been dropped, he disclosed.

He told the committee that the fact the companies are willing to risk their own money in pipe lines indicates their belief that the situation cannot be met by the use of tank cars. The Plantation line is being entirely financed by the builders, he said, but some consideration is given to securing an RFC loan for the $80,000,000 long-distance crude line.

British Comment

During the course of the discussion, Chairman Maloney read into the record excerpts from an article in The Economist, an important English magazine, regarding the tanker diversions and their effect upon the East Coast, and asked Davies if he had read the article.

The July 26 issue of the magazne, just received in this country, was issued before the mandatory cut in deliveries of gasoline. It said that the accession of Norway and Holland to the Allied cause had doubled the tanker tonnage at England's disposal and made it sufficient for all requirements, even with ample allowance for sinkings and delays.

"The handing over of another 100 tankers would certainly cause the most acute crisis on the eastern (U. S.) seaboard, for it would mean that the tonnage engaged in supplying these states had been reduced by 60 percent since the beginning of the year," it said.

The withdrawal of 50 tankers, it admitted, was of value to England, "but it has seriously disturbed the oil position in the highly industrialized eastern states, which are responsible for 40 percent of all American consumption and are supplied almost exclusively by sea."

Davies said he had not seen the article, but was in possession of much information from the British embassy. That material, however, could not be discussed publicly.

As he completed his presentation, Davies told the committee that restrictions similar to those in the East would probably be ordered on the West Coast in the near future. He also said that the oil administration will urge a reduction of fuel-oil consumption when winter sets in and will seek to induce industries which can do so to shift to coal. Chairman Maloney, however, expressed doubt whether such a move would be

—Harris-Ewing Photo

Senate investigation of gasoline rationing on the Eastern Seaboard opened at Washington August 28. First witness was Deputy Oil Coordinator Ralph K. Davies, shown at the left of the picture with a committee secretary. On the right are the Senators conducting the hearing—W. Lee O'Daniel of Texas; Francis Maloney of Connecticut, chairman of the subcommittee; Warren Barbour of New Jersey, and Harold H. Burton of Ohio.

effective, in view of the difficulties in coal transportation which are expected.

Land Proposes Barges

A proposal to construct 100 concrete barges, to be towed by a tanker and tugs, as the quickest way of dealing with the transportation shortage—the barges after the emergency to be used for mobile storage—was laid before the committee August 29 by Rear Admiral Emery S. Land, chairman of the Maritime Commission.

Land told the committee that such construction would be cheaper and quicker and far preferable to the proposed Texas-New York pipe line, to which he expressed opposition because it would require 750,000 tons of steel which the Navy and commission believe should be used for ship building. The barges, he said, could be constructed with 110,000 tons of steel, much of a quality inferior to that required for the pipe line and easier of procurement. He submitted figures to show that while the towing of barges would reduce the speed of tankers, total deliveries could be materially increased. Taking a 14,000-ton tanker which would deliver 310,000 tons of oil a year, he said, deliveries could be increased to 393,000 tons if one barge was towed and to 450,000 tons if two barges were hauled. A seagoing tug hauling one barge would deliver 102,000 tons and with two barges 175,000 tons.

If undertaken immediately, the first barges could be built by the end of the year and thereafter could be delivered at a rate of 20 a month, Land declared.

As the Maritime Commission head was speaking before the Senate committee, William S. Knudsen, director of the OPM, disclosed that he expects to receive a report September 2 on the possibilities of supplying steel for the proposed long-distance pipe line. The problem has been under study by the agency for some time in an effort to work out arrangements whereby the line could secure the steel without impeding the shipbuilding program.

Bunker Oil Scarcity

More serious than the gasoline shortage, which he said has been magnified in the minds of the people, is the possibility of a scarcity of bunker oil which may halt New England's defense activities, it was declared by Chairman Maloney.

More essential than assurance of a gasoline supply, he said, is a guarantee that Eastern industry will not have to fold up because of such a shortage.

He asked Land, point blank, if there is any "likelihood that the tankers now in use will be continued or may additional tankers be taken away," and was told equally flatly, that "My best judgment at the moment is that they will be continued and we will attempt to augment the supply."

At the outset of his testimony the commissioner laid the blame for the present situation on a "gentleman by the name of Hitler" but charged that laws enacted by Congress shared in the responsibility. Pressed to be specific on the latter point, he declared the lease-lend bill, under which tankers were transferred to British service, was imposing a burden on industry.

Land declared that no tankers under the American flag have carried oil to Italy, Germany or Japan since the outbreak of the war and no American-owned tankers under foreign flag are now making any such voyages. Strongly defending the British against charges that they were using tankers for commercial operations, he asserted that "all tankers under British control are being fully employed in the war effort, and none are engaged in 'business as usual.'"

Discussing the tanker diversions with Land, Chairman Maloney asserted the industry had responded "too quickly" when asked to turn its tankers over to the government and that it might have been better to have waited until more mature judgment evaluated the results upon our own industry.

"They didn't do it until they had to," Land retorted.

Land explained that 139 tankers, faster and larger than the present average, are under construction or contract for private and government account, and told Senator Burton, who had been pressing the point, that 25 of them were scheduled for delivery by April. Asked by the Senator whether the increased speed and size of these boats would not enable them to make up present transportation deficiencies, the witness said, "If we can deliver these 25 modern tankers by April that is the answer to the oil shortage but I do not know whether they will be used in the East Coast service."

Some relief is due to be given within the next two or three months, if all international problems involved are cleared up by the use of 26 of the 35 tankers recently seized in Latin American ports.

Land said there were 22 Italian, 9 French, 2 German and 2 Danish ships taken over, but the French ships cannot be used.

The world tanker tonnage, he said, is approximately 16,000,000 dead-weight tons, of which 13,600,000 tons is in the hands of the Democracies and 2,400,000 tons owned by the Axis powers. Although he hesitated to answer a number of questions and was told he could withhold his responses until the committee went into executive session later in the day, Land did say that if there ever was any leakage of oil to the Axis powers from the Canary Island shipments, it has been "cured."

He said also that the British have not adopted needlessly long routes for their tankers, pointing out that it is impossible for any belligerent to operate efficiently under war conditions. "The British have given us all the essential information" he declared.

The public hearing will be resumed September 3, when John J. Pelly, president of the American Association of Railroads, will testify. He will be followed by Ralph Budd, transportation commissioner of OEM and Leon Henderson, head of OPACS.

Drilling Halt

"Unnecessary" drilling in proven fields was halted August 27 by the oil administration but continuance of exploratory work was encouraged, with Deputy Coordinator Davies asserting that the search for new fields should go forward so as to maintain a discovery rate that will avoid depletion of reserves and overproduction of existing fields.

Discontinuance of competitive drilling in established fields was held to be essential because of the growing shortage in steel and other metals and materials.

"In view of the obvious shortages of oil-well supplies resulting from the necessities of the defense program," Davies said, "the oil industry and the state regulatory bodies having control of well spacing patterns must realize that further drilling of unnecessary wells is against the public interest and must be stopped.

"Newly developing fields must be drilled on the widest feasible spacing patterns and reasonable bottom-hole pressures must be main-

tained in order to prevent underground waste of oil which otherwise may be recoverable by closer drilling when the emergency has passed and oil-well supplies are again plentifully available.

"In this crisis the nation cannot allow material to be wastefully used for town-lot drilling nor for additional wells in fields already adequately drilled. Wildcat drilling must continue at an unabated rate, but we can afford to expend material for development drilling only in exchange for substantial additions to our reserves."

Prices

Cracking down on the Pennsylvania industry, Leon Henderson, administrator of OPACS, has ordered ceiling prices which restore quotations for Pennsylvania grade crudes to levels prevailing before the increase of 23 to 25 cents a barrel instituted August 14.

With the approval of the Oil Coordinator, OPACS outlawed prices in excess of $2.75 per barrel for Bradford crude, $2.40 for Southwest Pennsylvania crude, $2.34 for Eureka crude and $2.30 for Southeastern Ohio crude, with top prices for the various qualities of crude produced between Oil City and Titusville ranging from $2.63 to $2.69 per barrel.

In announcing the ceilings, the defense agency pointed out that even before the August 14 increase, prices for Pennsylvania grades had risen 90 cents a barrel since November, 1940, a series of increases during the past 9 months aggregating about 50 percent and bringing quotations to or near the highest level in 10 years.

"The increases over 1940 prices were greater on a percentage basis than any advances in the prices of any other grades of crude oil in the United States over the same period," it was declared.

"The difficulties and delays involved in developing new supplies of Pennsylvania-grade crude oils are such that even the substantial price increases of the past 9 months have not called forth additional supplies in great volume," Henderson explained. "Higher prices which do not serve to increase supplies appreciably and which cannot be justified by higher costs are inflationary."

Henderson pointed out that the August 14 increase was instituted during the course of an inquiry into Pennsylvania-grade prices initiated by OPACS after the defense agency had requested a 25-cent increase proposed to go into effect August 1 be deferred until it could study the situation.

How much additional production would have been developed had the 25-cent raise been allowed is "extremely questionable," Henderson said, but producers will be given every opportunity to demonstrate that higher prices are justified in the public interest. Until that is done, however, he added, no increase in prices will be permitted.

Less High-Test

The first step toward the proposed doubling of 100-octane gasoline production was taken by Deputy Coordinator Davies during the week with imposition of a ban on the further use of blending agents of petroleum origin in gasoline for other than aviation use.

The order was embodied in a "recommendation" to refiners, calling upon them to conserve supplies of the Iso-octanes, including alkylates, hot-acid octanes and hyrocodimers; Iso-pentanes and Neohexanes.

"This office has called for a doubling of 100-octane refining capacity to provide an additional margin of safety, but it takes time to bring expanded or new plants into production," said Davies.

"Pending the day this objective is achieved, one positive immediate step that can be taken in the direction of our goal is to withhold these vitally necessary agents from uses other than that of producing high-test aviation gasoline. Accordingly, there should be no further diversion of these components either to the production of motor fuel or to aviation gasoline of less than 100-octane."

The order will apply only to petroleum-base blending agents, it was said, and will not affect the use of tetraethyl lead in gasoline for consumer supplies.

Tanker Rates

Moving to stabilize tanker rates and prevent widespread price fluctuations, the Maritime Commission on September 1 instituted maximum charter rate schedules for American and foreign tankers, ranging from $4.50 per ton for 10,000-ton ships to $6.05 for vessels of 2,500 to 2,900 tons.

The commission's action was taken under authority of the Ship Warrants Law, recently enacted, giving it authority to exercise rate control over foreign vessels and others which might fail to comply voluntarily with established maximum rates.

Publishing its new scales during the week, the commission disclosed that further study will be made of tanker charter rates, the results of which will be announced during the month. Rates on tankers of less than 2,500 tons were not fixed, but will be considered individually on the respective merits of each case.

Most of the ships affected by the rate schedule are in the 10,000-deadweight-ton category, it was said. The schedule rate is for vessels of not less than 10 knots, and an additional charge of 10 cents per deadweight ton per month is permitted for each ½-knot in excess of 10 knots, based on actual proved performance under load conditions.

No vessel is to receive more charter hire under the new rates than a vessel of the lowest tonnage in the next higher class can earn at the rate shown for that class, and the commission requested that freighting arrangements be made so that the yield to owners and operators will not exceed the charter rates for the type of vessel normally employed in the trade, plus reasonable allowances for management overhead, profit and loss risk, etc.

In cooperation with the coordinator's office, the commission on August 27 announced formation of a Tanker Control Board "to coordinate all effort bearing on the allocation and utilization of tankers owned or controlled by American companies."

Deputy Coordinator Davies was named chairman of the board, with M. W. Bowen, assistant director of the commission's division of emergency shipping, as vice chairman. Other members named were Commander W. M. Callaghan, Navy Department; Eugene Holman, Standard Oil Company of New Jersey, New York, representing the oil industry in District 1; J. R. Parten, Woodley Petroleum Company, Houston, District 3, and L. E. Fleming of California, District 5.

The primary duty of the board will be to coordinate the operations and use of American tankers in all services.

Pipe Lines

First application of the condemnation provision of the Cole Pipe Line Act was set in motion during the week when President Roosevelt, from Hyde Park, proclaimed

[*Continued on page 58*]

Emergency Priority Rating Sought by Equipment Men

AS A RESULT of a meeting of several hundred petroleum-equipment manufacturers and supply men in Fort Worth Tuesday, Auguest 26, with Robert E. Allen, Director of Production under Petroleum Coordinator Harold L. Ickes, steps are being taken which, it is hoped, will alleviate the very acute shortage now facing the petroleum equipment industry on raw materials. On Monday, August 25, the manufacturers and supply men had met and discussed the situation brought about by the recently issued OPM Order M-21 which practically stops the flow of steel and other vital materials to companies who cannot produce a high priority preference rating.

At the Monday meeting it was brought out that while many manufacturers may have a few months supply of one kind of raw material or another, most of them were so short on other materials that many were facing a shut-down within 60 to 90 days.

Following a general meeting Tuesday with Allen, who greatly impressed the equipment and supply men by his desire to assist and his frank approach to the subject, Allen met with a special committee appointed for that purpose to consider the situation and to work out an emergency plan.

Late in the afternoon the committee reported back to the general meeting that a questionnaire would be sent to every manufacturer and supplier, asking for an estimate on the amount of steel and other materials which will be needed for the next four months, and an inventory on the stocks of such materials.

Childs Heads General Committee

Commenting on this request, W. L. Childs, Reed Roller Bit Company, Houston, who was appointed chairman of the general committee to deal with the emergency, said:

"Each manufacturer and supplier will receive a letter by September 1 or 2, asking him to set out his requirements in tons, for the four months ending December 31, and to give an inventory of such stocks on hand. If the manufacturer has sufficient stocks on hand of any of the materials listed to last through December, he will not write in his requirements, nor inventories, but will be expected to produce his equipment out of his inventories. On the other hand, if he is short, or sees that he will be short of such materials or any part of them between now and December 31, he will list his requirements and his inventory."

The replies to the questionnaire will be returned to an accounting company after being filled out, and this firm will tabulate the returns, holding confidential the individual replies. This tabulation in turn will be presented by Allen, a committee of manufacturers and a committee of oil men, to the OPM in Allen's application for a special priority rating for oil-field equipment and supplies for the next four months only.

During the next four months it is proposed that a general survey of next year's needs will be made between the oil companies and the manufacturers, in order that a complete picture of next year's requirements be set forth.

Questionnaires were mailed August 29 to as complete a list of manufacturers and suppliers as the committee could devise. To speed up the return of the questionnaires, an airmail stamped, self-addressed envelope was enclosed. The committee made it plain that if a manufacturer or supply man failed to receive his questionnaire by the afternoon of September 2, he should apply to the Petroleum Equipment Supplier's Association, Esperson Building, Houston, for duplicate copies of the questionnaire, whether he be a member of the association or not.

Stress Oil as Defense Item

Speaking to the general assembly on Tuesday, Childs, who had been chosen as the spokesman for the equipment and supply men, said to Allen:

"We all realize that the defense program is the biggest thing before the Nation," and then added that without oil, the tanks and planes being built would be useless. Then he said that unless equipment could be provided for the oil companies the production of oil would be materially hampered, pointing out that for these reasons oil country equipment should be placed among the vital necessities in the defense program.

Allen, in responding said that he was at the meeting primarily in the position of the producer who realized that drilling, producing, and all other petroleum operations could not be carried on without adequate equipment. He offered his assistance in working out a program to handle the situation. He said that Ickes had made it plain that there is to be nothing of dictatorship or coercion in his program. He referred to a surplus of various products only a short time ago, and a shortage now, and predicted a more acute shortage on raw materials in the future than is now being felt.

Allen said that the oil industry had made some statements about its position and asserted that the country as a whole had accepted the industry's remarks about its position and asserted that the country as a whole had accepted the industry's remarks about its preparedness.

Referring to the big pipe line from Texas to the Atlantic Seaboard, he said that the project was so large that it must be figured very carefully because of its impact on other uses and users of steel.

At one point in his speech he

asked: "Is it safe to say that the producers of petroleum can at all times supply the needed oil?"

Only 70 Percent Normal Supplies

After pointing out that petroleum is the only individual industry to be integrated under one federal head, he mentioned the necessity of placing the priorities of equipment for petroleum under the same head, and described how such priorities are handled through Ickes' office with the OPM. At one time he indicated that it might be a worthwhile idea for manufacturers of petroleum equipment to form an entity under the Petroleum Coordinator's office, or coordinate its efforts closely with the oil committees appointed by Ickes.

He stated that the oil industry would be expected to produce 100 percent or 110 percent of this year's crude oil next year, on 70 percent of its normal supplies of equipment, and said that how to make the supply do the job was the problem of the oil producer and the equipment man.

He added that he is recruiting personnel from the petroleum-equipment-supply industry in his department which will deal with equipment priorities, S. L. Stenz, formerly with National Tank Company, Tulsa, having just been added to his staff in this connection.

Then followed a period of questioning during which Allen answered all questions either with a concise, practical statement, or the frank reply that he had no answer at this time. One of these questions dealt with the status of an export order with export license attached as compared with a domestic order, and he said that in this matter the state department also had a hand, and its wishes must be deferred to.

In response to another question he agreed that it might be necessary that the American Petroleum Institute's standards "simplified" (lowered?) wherever possible, and said that he was working with the API on this matter right now. Standards other than API also are involved, he said.

Revision of Standards

At this point Carl A. Young, head of the API Department of Standardization, Dallas, made a brief statement of what is being done. He said that a list of standards is being made, that a study of the degree by which these are affected by National Standards is being undertaken, and indicated a sympathetic attitude on the part of his department toward cooperation in the matter.

Allen said that the impact of the general shortage of materials might be felt in deep drilling where alloy steels are necessary and predicted that it might be necessary to allocate to the deep areas all or considerable portions of such alloys as may be granted to the entire industry.

Responding to the remarks by Allen, Childs then asked for a blanket priority, as devoid of red tape as possible.

"We cannot be bogged down in red tape and meet the emergencies we face in this industry," he declared. He suggested cooperation between Allen's office and the committees which had been appointed the previous day, committees which had been moulded along the line of the committees of oil men appointed by Coordinator Ickes.

Allen promised his cooperation in working out a plan, and the meeting adjourned to allow Allen and the general committee to consider it.

When the plan was brought back to the general meeting later in the day, looking to an emergency four-months' special priority for materials used in oil-country equipment, Allen declared that time was the essence of the plan, urged the manufacturers and supply men to get their questionnaires in quickly, pointed out that the questionnaire should not in any way interfere with efforts individual manufacturers might be making to get special priorities, and concluded with these remarks:

"Whatever else you think, do not go away from this meeting with the idea that business can be conducted as usual. We must do more and more with less and less for the remainder of this emergency."

In discussing the questionnaire to be sent manufacturers and supply men, Allen said that if a manufacturer's inventory on a product showed that he had more than four months' supply on hand, he would not be given a special priority under the proposed emergency action.

Asked if such procedure might later be applied to oil companies, he said that if a company had a surplus supply of a product on hand, obviously it would have to reduce that surplus before being allowed to receive additional supplies.

Privately, Allen told THE OIL WEEKLY that he felt that first call on equipment should go to the drilling of wildcat wells, saying that the National reserves must not suffer. He agreed that after such preference, the next preference on priorities for oil-country equipment should go to subsurface and other recovery equipment.

He said that a plan must be worked out as quickly as possible in which the needs of the industry for next year would be developed. To the suggestion that the first need was a statement of petroleum requirements, the next, an estimate of drilling based on these requirements and lease contracts, and finally an estimate of equipment required to drill and produce the wells under the most efficient methods possible, he expressed agreement. Asked about close drilling, he indicated that the Petroleum Coordinator's office did not look with favor on town-lot drilling, although he did not mention a definite per-acre pattern which would be acceptable. His conversations indicated a clearcut knowledge of the industry and a full appreciation of its problems and those of the equipment men.

Following are the committees selected by the equipment and suppliers to cooperate in the effort to establish improved priorities on petroleum equipment and supplies:

General Committee

W. L. Childs, Chairman; W. M. Bovaird, E. S. Dulin, Rodney Durkee, H. W. Fletcher, E. W. Gildart, H. E. Howard, Percy Jones, Jerry McJunkin, A. W. McKinney, Earl Miller, W. J. Morris, F. F. Murray, George O'Leary, J. H. Shakely, Fred J. Spang, Ted Sutter, Guy A. Tompson and Jas. P. Walker.

District Committees

Eastern District: A. W. McKinney, Geo. H. Alten, Sam Gregg, Gene Harper, Percy C. Jones, Donald W. Mackie, Fred W. Miner, Jerry McJunkin, F. F. Murray, Casper A. Ruf and Fred J. Spang.

Mid-Continent and Rocky Mountain District: W. M. Bovaird, J. H. Brooks, J. R. Brooks, D. R. Brown, J. P. Walker, Frank J. Hinderliter, Jno. J. Larkin, Earl W. Miller, A. A. Moody, Walter O'Banion, J. L. Shakely and Guy A. Tompson.

Southwestern District: W. L. Childs, A. B. Judd, H. W. Fletcher, E. W. Gildart, Allen Guiberson, J. M. Kinnebrew, Ed L. Lorehn, W. B. Sharp, E. M. Smith, J. W. Morris, J. H. Teer, Wallace D. Wilson and George O'Leary.

Pacific District: E. S. Dulin, J. C. Axelson, Markley C. Brown, J. A. Crawford, D. S. Faulkner, H. H. Glenn, H. E. Howard, L. H. Keim, Rodney Durkee, George Schwinehart and Ted Sutter.

Earnings Run Well Ahead of Those Recorded Last Year

EARNINGS of the oil industry for this year promise to be better than those of last year and above the average of the post-depression period, although short of the record for 1937, one of the most profitable years in the history of the industry.

The third quarter of 1941, now nearly two-thirds over, is due to be more profitable than either the first or second quarter, and it very likely will be better also than the final quarter, for reasons just given. This quarter may be, in fact, one of the best in the history of the industry, in reflection of record-breaking and as yet unrestricted domestic consumption of petroleum products and in reflection of comparatively good prices of crude oil and products, following the material advances of the latter half of the second quarter.

Certainly, the third quarter of 1941 will compare very favorably with the similar period of 1940, as petroleum product prices steadily weakened in the latter half of 1940.

This outlook for the third quarter offers promise that 1941 earnings will materially exceed those of 1940. For even at mid-year, accumulated profits of 1941 were a little above those for the first half of 1940; and by the end of the present quarter, a substantial improvement over last year will be shown. Furthermore, although the fourth quarter of this year may be disappointing because of the shortage of tankers for supplying the East Coast, that period should compare favorably with the last quarter of 1940, which was marred by extremely low prices of gasoline and of some other products.

As indicated in the accompanying table, 29 oil companies, constituting a material part of the industry, earned approximately 2 percent more profit in the first six months of 1941 than in the first half of 1940, although 25 percent less than in the corresponding months of 1937.

Results for the second quarter are available for 22 of these companies, the others reporting only semi-annually, and the 22 earned 38.4 percent more during the period than in the second quarter of last year, their combined profits having been within 14 percent of those in the like period of 1937.

Net Profits of Oil Companies Relatively Good for Second Quarter and for First Six Months

(Figures indicate net income after all deductions, including interest, depreciation, depletion, amortization, federal taxes, minority interest, etc., unless otherwise noted)

	SECOND QUARTER						FIRST 6 MONTHS					
COMPANY	1937	1938	1939	1940	1941	Percent Change 1940-1941	1937	1938	1939	1940	1941	Percent Change 1940-1941
Amerada Corp.	$552,991	$448,172	$355,228	$425,943	$593,642	+ 39.4	$1,070,107	$883,061	[5]$674,989	[5]$885,364	$1,100,286	+ 24.3
Atlantic Refining Co.	1,447,000	818,000	815,000	[2]2,143,000	[2]2,315,008	+ 8.0	3,440,147	2,866,327	1,353,000	5,266,000	5,063,000	— 3.8
Barnsdall Oil Co.	665,175	766,242	492,622	[2]732,391	[2]823,536	+ 12.4	1,256,330	1,690,039	1,058,039	1,090,128	1,310,105	+ 20.2
Continental Oil Co.	4,193,336	1,281,510	2,069,280	1,007,852	2,642,082	+ 162.1	7,884,529	3,086,707	2,537,280	2,388,286	3,857,664	+ 61.5
Houston Oil Co.	456,046	358,052	145,618	96,106	257,951	+ 16.8	925,413	841,535	527,508	574,609	681,231	+ 18.5
Lion Oil Refining Co.	355,012	294,068	226,997	207,780	[6]313,693	+ 50.9	431,264	595,000	215,178	378,876	440,337	+ 16.2
Louisiana Land and Exploration Co.	468,000	318,000	192,823	267,597	260,815	— 2.5	[5]1,008,600	[5]771,000	[5]420,966	[5]507,329	649,256	+ 27.9
Mid-Continent Petroleum Corp.	1,860,735	574,264	678,793	714,370	1,233,718	+ 72.7	3,093,761	1,042,574	640,836	2,169,047	1,758,348	— 18.9
Panhandle Producing & Refining Co.	[1]100,333	[1]16,254	[1]32,801	*29,918	67,936	.....	[1]136,676	[1]16,254	[1]21,201	*16,886	89,833	.....
Ohio Oil Co.	[3]3,250,728	[3]1,391,368	[3]154,993	[2]2,366,103	2,843,043	+ 20.2	6,722,357	2,683,516	*142,559	4,658,397	4,776,815	+ 2.5
Phillips Petroleum Co.	7,063,443	[3]3,270,497	[2]2,288,536	[3]3,091,578	4,928,788	+ 5.9	12,679,080	5,585,139	3,774,069	6,378,198	8,236,680	+ 29.1
Plymouth Oil Co.	722,677	625,228	552,941	412,378	382,371	— 7.3	1,362,996	1,328,120	1,172,704	998,819	628,177	— 37.1
Quaker State Oil Refining Corp.	491,813	*259,851	277,584	*131,872	698,791	.....	879,550	*158,379	554,790	159,245	916,846	+ 475.7
Seaboard Oil Co.	638,853	437,157	384,380	259,543	317,238	+ 22.2	1,230,218	893,886	785,431	762,492	581,596	— 23.7
Shell Union Oil Co.	4,806,448	2,922,990	1,684,156	4,135,788	4,208,151	+ 1.7	8,480,927	5,830,437	2,162,422	9,449,947	7,829,945	— 17.1
Skelly Oil Co.	1,901,504	613,471	517,838	771,680	1,770,829	+ 129.5	3,435,918	1,278,241	756,918	1,544,961	2,669,746	+ 72.8
Standard Oil Co. of California	9,890,701	8,282,949	3,891,587	5,834,872	7,970,883	+ 36.6	17,780,191	15,413,435	7,117,604	10,369,495	12,770,067	+ 23.1
Superior Oil Corp.	94,524	82,273	35,722	32,434	68,437	+ 111.0	136,691	194,945	51,868	76,978	[5]118,025	+ 53.3
Texas Corp.	16,200,000	[2-3] 8,400,000	[3]5,650,000	[3]13,250,000	[3]16,807,368	+ 26.8	27,000,000	[3]14,500,000	[3]7,000,000	[3]26,000,000	[3]23,407,368	— 9.9
Tide Water Associated Oil Co.	4,368,398	2,742,441	1,097,228	2,124,645	[3]3,387,297	+ 59.4	7,696,701	5,992,705	2,331,410	5,904,865	6,247,247	+ 5.8
Texas Pacific Coal & Oil Co.[4]	235,006	260,530	209,452	113,148	273,907	+ 142.1	455,506	500,748	415,812	292,840	469,505	+ 60.3
Union Oil Co. of California	3,000,000	2,650,000	1,596,509	1,248,232	1,902,889	+ 52.4	5,200,000	4,950,000	2,651,144	2,014,380	3,175,895	+ 57.7
Total 22 Companies	**62,763,723**	**36,293,615**	**23,350,088**	**39,073,650**	**54,068,373**	**+ 38.4**	**112,306,962**	**70,785,290**	**36,080,610**	**81,853,370**	**86,777,972**	**+ 6.0**
Derby Oil & Refining Corp.	.....	.....	.....	.....	.....	.....	344,208	*87,026	24,435	36,410	173,582	+ 376.7
Pure Oil Co.	.....	.....	.....	.....	.....	.....	[3]6,000,000	2,021,440	2,433,456	4,700,000	4,900,000	+ 4.2
Socony-Vacuum Oil Co., Inc.	.....	.....	.....	.....	.....	.....	[3]32,000,000	[3]19,000,000	[3]17,000,000	[3]22,000,000	18,000,000	— 18.2
Standard Oil Co. of Indiana	.....	.....	.....	.....	.....	.....	27,904,211	17,749,093	14,979,694	20,497,223	21,763,134	+ 6.2
Sun Oil Co.	.....	.....	.....	.....	.....	.....	4,376,371	1,759,686	1,085,898	4,973,265	4,798,179	— 3.5
Sunray Oil Corp.	.....	232,343	194,205	.....	.....	.....	[3]572,060	426,654	349,413	261,191	305,729	+ 17.1
H. F. Wilcox Oil & Gas	6,995	75,314	103,041	.....	.....	.....	61,684	133,401	181,059	40,032	87,555	+ 118.7
Total 7 Additional Companies, First 6 Months Only	.....	.....	.....	.....	.....	.....	**71,258,534**	**41,003,248**	**36,053,955**	**52,508,121**	**50,028,179**	**— 4.7**
Total 29 Companies, First 6 Months Only	.....	.....	.....	.....	.....	.....	**183,565,496**	**111,788,538**	**72,134,565**	**134,361,491**	**136,806,151**	**+ 1.8**

* Net loss. [1] No provision for federal taxes. [2] Based on a comparison of Company's reports for first quarter of fiscal year and the six month's period. [3] Estimate by Company. [4] After allowances for statutory deductions and credits, no provision made or considered necessary for federal income and excess profits taxes. [5] Compiled from first and second quarter reports. [6] Estimated on basis of semi-annual report.

Tug boats pull long strings of barges through the bayous to the Intercoastal Canal, bringing South Louisiana crude oil to market.

Tugs and Barges

Used by Industry to Convert Natural Handicaps To Its Own Advantage in Moving Louisiana Oil

By GORDON B. NICHOLSON, Staff Writer

ON THE day the first successful wildcat marked finding of oil in the "Bayou Country" of South Louisiana, a problem of conveying production to refineries presented itself, and since that time, with an ever-increasing volume of crude produced in this portion of the state, means of transporting it from oil field storage tanks has grown in magnitude. Nature, in the same way in which she retarded discovery and development of the state's petroleum resources, also did the utmost to thwart its movement but with evolution of modern oil field practices, the industry learned to convert natural handicaps to its advantage, and now uses the countless waterways of this part of the state as highways for barge movement of petroleum from sea-level oil fields.

The oil man's solution to the challenge regarding movement of oil in this inaccessible region has boomeranged, due to his ingenuity, to such extent that operators in the area realize numerous benefits over ordinary transport methods. Water is and always has offered a feasible way of freight movement, and the numerous inland bayous and lakes of South Louisiana are interconnected and are directly or indirectly joined to the open water of the Gulf of Mexico. Thus, a great freedom of routes rests in the hands of operators. Oil is not confined within the unbending walls of a pipe line, nor relegated to follow a mandatory route to a specific destination. Instead, great pliability is enjoyed in selection of routes and destination, with oil shipments free to travel east or west to any of the large refineries on the Gulf Coast or Atlantic Seaboard or to foreign markets. Accordingly, oil operators of South Louisiana have unrestricted access to world markets for their products to a greater and more liberal degree than do producers in other territories.

Companies employ diverse methods of moving oil, some operating company-owned barges propelled by company tugs, while others use contract barges and equipment. However, almost without exception they use waterways for its transport, those consisting of natural and dredged canals, channels, and lakes of indeterminable number and all ultimately converging,

by devious routes, with the principal inland marine passage, the Intracoastal Canal.

These canals and bayous used for barging offer a dependable method for moving oil. The waterways are always usable with exception of unusual winter periods of strong north winds which occasionally drive the water out into the Gulf of Mexico and into the numerous bays to such proportions that waterways temporarily become too shallow for barge movement. This is a rare occurrence, but presents the chief obstacle to this means of transport.

Pipe Lines Nearly Impossible

Laying pipe lines through the area would have constituted an almost impossible undertaking, as in some localities, endless miles of the terrain is submerged and stretches through enormous swamps. With the entire territory influenced by tidal movements due to proximity of the Gulf of Mexico, construction of pipe line systems would have been prohibitive in monetary expense and endangerment of human lives, and their maintenance would have been an even greater problem as result of corrosion, need for steady policing, and impracticability of pump stations. Many lines would have had to be constructed across the Mississippi, which in itself would constitute an expensive undertaking, but the principal obstacle is presented by the endless expanse of water lands.

The main stretch of impassable land in South Louisiana is in the Atchafalaya Basin which consists of an interminable network of canals and swampy timberland reaching from the vicinity of Morganza, on the Mississippi above Baton Rouge, to the Gulf of Mexico. This river is a short cut used by the Mississippi in an attempt to reduce by many miles its long journey to the Gulf. Man's ingenuity controls the path of the Mississippi, with intricate locks constructed at its Atchafalaya River junction to regulate amount of flow allowed to drain through the river, and also to provide a bountiful outlet for excessive waters during flood periods to relieve strain on the lower levees near Baton Rouge and New Orleans. During such times, the water level in the river and in the flooded swamplands varies considerably above the normal level, such variance giving added emphasis to the difficulty of maintaining pipe lines in the area. Pipe line construction would be impeded also by complicated currents prevailing in the Basin, as well as isolation of proposed itinerary, and the devious routes which would have to be used.

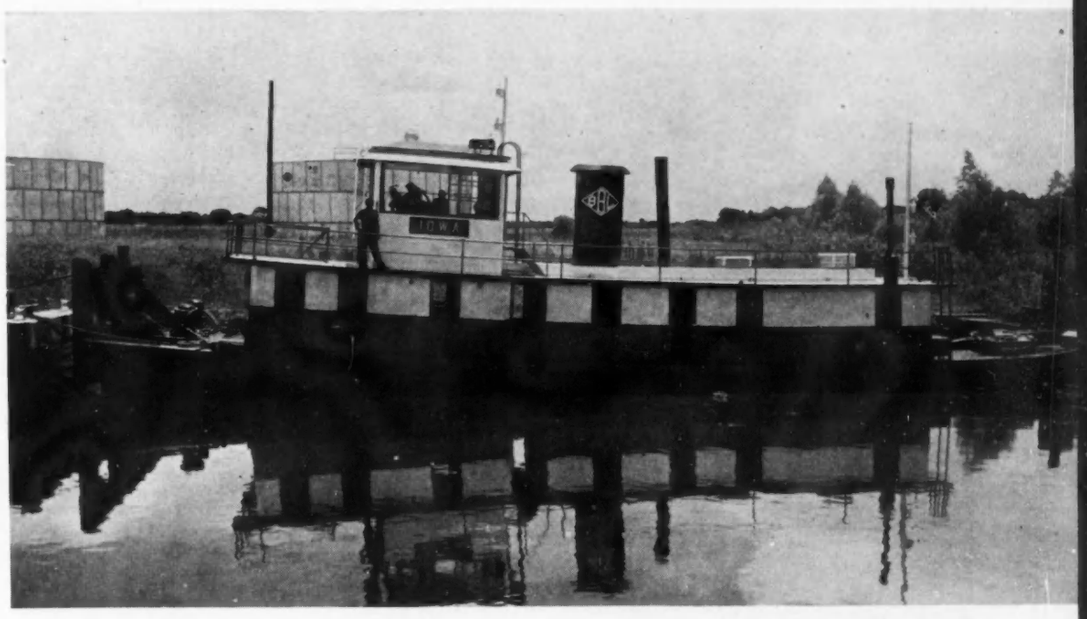
The Atchafalaya is the largest natural hindrance to pipe lines in the area, but numerous swamps less vast in extent would also hamper construction and maintenance. As a result, from the eastern boundaries of the state to oil fields as far west as Chalkley and Black Bayou near the Texas border, many operators use only barges for transportation of oil, facilitated in most cases by location near the Mississippi, Gulf of Mexico, or Intracoastal Canal, which shortens the journey through dredged and shallow waters.

Facilities Used Vary

Various type facilities for barge shipment of oil are in use, some having large storage tanks at the terminals, with elaborate equipment for transferring to the oil barges which are themselves sturdily constructed for seaworthiness and usually acquired at comparatively great expense. Other operators with less oil to handle employ the simplest form of storage and shipment, with nothing more than small lease tanks and hoses for transferring oil to the barges. Crude terminals are constructed in nearly all the fields, and are designed to take advantage of the natural characteristics that the specific area has to offer. Storage and loading facilities at Gibson and Chalkley are erected, beside especially dredged canals, while natural canals and bayous serve several fields such as Evangeline, West Lake Verrett and Anse la Bute, located near natural waterways that include Bayou Nezpique, Bayou Teche, and Vermilion Bayou. Many fields are located on rivers or large bodies of open water, and are fortunate in having deep water available for shipping with little or no dredging. Fields of this type include Potash, located on the Mississippi, and Venice and West Bay, with terminals in the open bays and waterways near the Gulf.

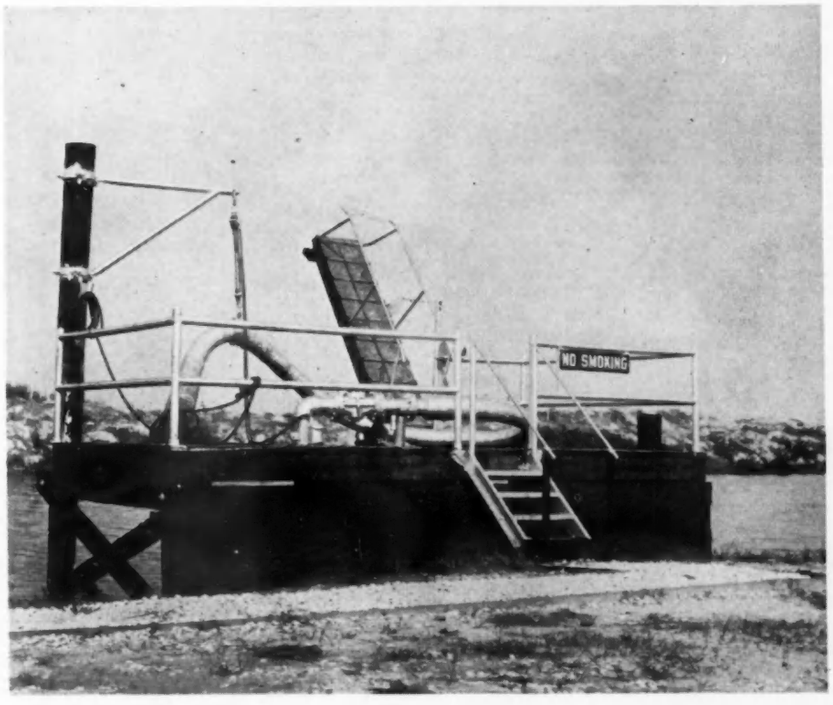
Several major companies maintain complete storage and loading facilities at terminal locations, where large quantities of oil are kept in steel tanks until arrival of the barges. Arrangements are usually made for their arrival at specified intervals, depending on the field allowable and the size of the transporting barges. The average barge has a capacity of 10,000 barrels, and often makes the tortuous trip through the bayous with as many as three lined together. Two 10,000-barrel barges carry as much oil as an ordinary freight train load of 85 tank cars, and with loading facilities that several large oil com-

A 10,000-barrel all-welded steel barge draws 8½ feet of water loaded and 1½ feet empty. Many bayous are affected by tidal waters and are navigable except during rare periods in winter when winds from the north drive water into the Gulf of Mexico.



Tug equipped with squared bow and permanent fenders designed especially for pushing a tow of barges in narrow waterway. Two typical oil tanks in background.

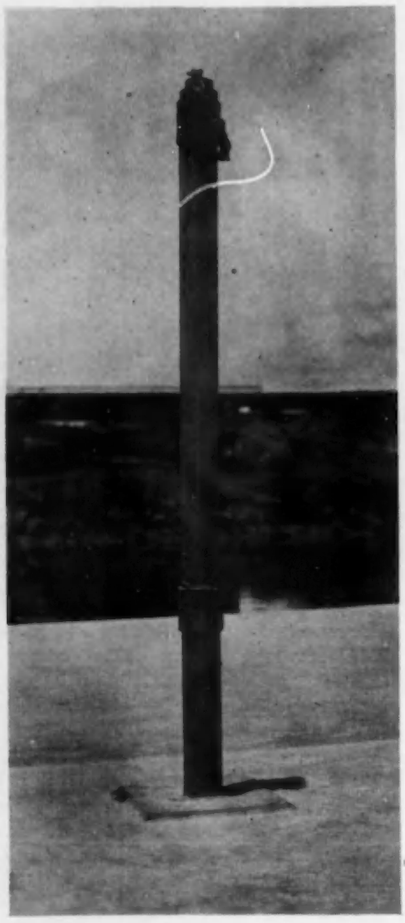
Gang plank on this loading dock is adjusted by hand winch, permitting movement of workers from the barge to canal bank. Flexible connection also is regulated by hoist and crane to tie into inlet pipe on barge when being loaded.



panies use, are completely filled within six hours, loading at the rate of 3000 barrels hourly through a single load line. One oil company constructed two loading docks at an important field, spaced at proper intervals to permit loading two barges simultaneously to reduce loading time by one-half. Large conveyor pipes equipped with flexible connections and hand hoists to facilitate raising and lowering are directed toward the loading compartments of the barges, and conduct a large stream of oil from the storage tanks into the barge compartments. Tanks are usually elevated to employ gravity into the barges, but all large terminals are provided with booster pumps to expedite the process and to make possible transfer of large quantities in a short time. These pumps usually consist of simple 4-cylinder, gas-driven engines motivating rotary pumps. During loading operations, many oil companies provide gangplanks which are adjusted to permit movement of workers from barge to shore, the walkways usually manipulated by hand winches similar to the loading pipes.

Size of barges varies sharply, with larger barges having lengths exceeding 200 feet and 40-foot beams. When empty, they require little water depth, the 10,000-barrel barges drawing only 1½ feet of water at such times, and 8½ feet when carrying a full load, their own sides being nine feet high. The largest barges have depths of fifteen feet, and require almost that amount of water to float when filled to capacity, as all barges are nearly submerged when loaded, usually no more than six inches of their sides being visible above the water line. The all-steel barges, welded throughout, are divided into several compartments, the larger barges having eight or more, and by valve control, they are filled simultaneously or separately as desired, with flow to the various compartments regulated by valves placed conveniently on the deck. Special gauging devices are installed on the decks, one type consisting of a two-inch pipe extending through the deck, standing upright about four feet high and equipped with a removable plug to lessen exposure to the air of the stored oil inside. When plug is removed, a gauge line is lowered into the compartment through the pipe conductor, and accurate determination made of the fluid level inside the compartment which is tested. Waves and other irregularities on the surface of the liquid are dissipated inside the small-diameter gauging pipe.

The larger barges are equipped with hatches opening into the various compartments, with steel ladders extending inside to permit entrance of workers to repair or clean them. As ventilation inside is lim-



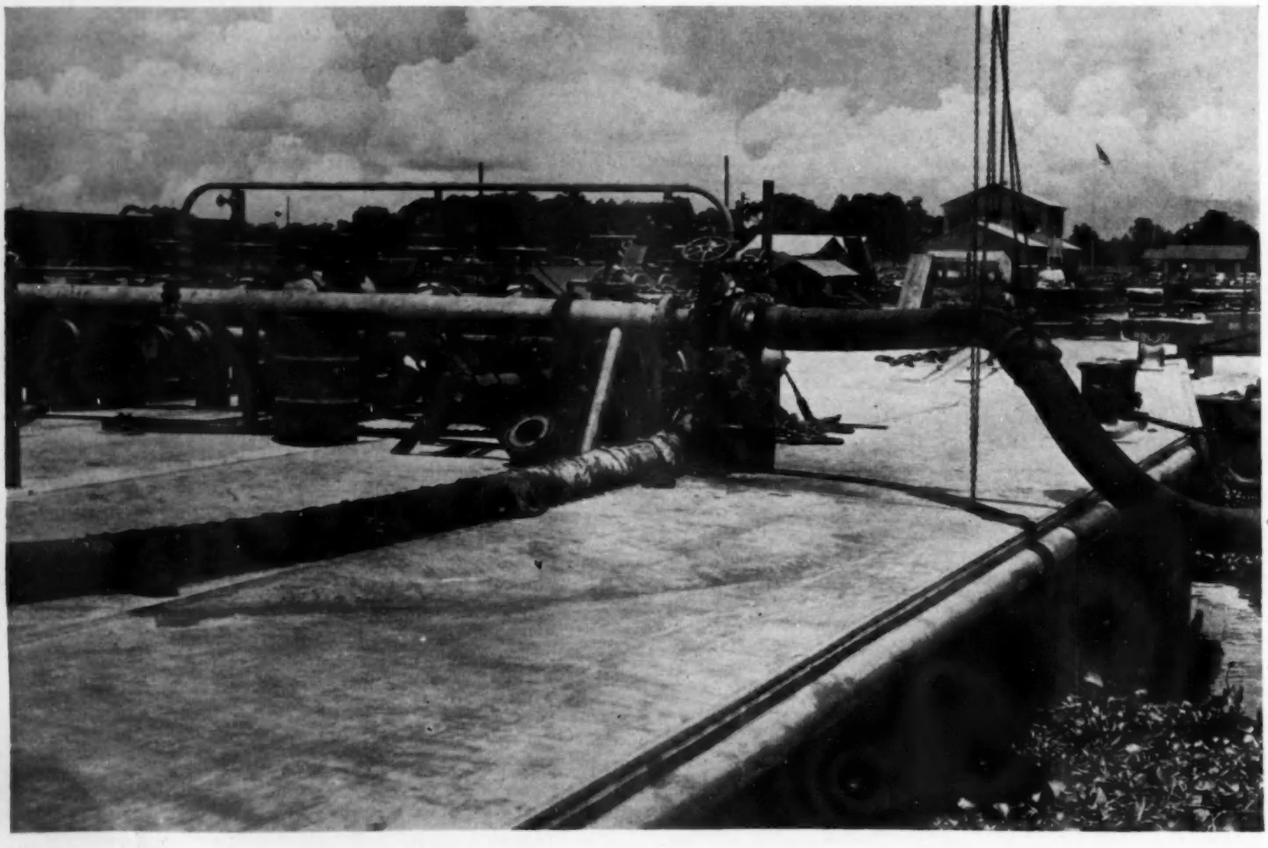
Two-inch pipe enters storage compartment from deck and is capped to prevent evaporation. Gauge lines are lowered inside, using pipe as conductor, to give accurate measurement of oil level in barge.

ited, care is taken that the fumes from expelled oil cause no harmful effects to the men inside, usually a thorough steaming being necessary before their entrance.

Unloading at the end of the journey by water may also be done by individual compartments, and regulation of oil distribution by weight is carefully watched to preserve equilibrium of the barges and maintain level position. Many barges are equipped with steam or gasoline pumps for emptying oil at the receiving station, but usually shore pumps are available for the purpose, and are more readily maneuvered for operations.

Diverse types of boats are utilized for propulsion of the barges, some being elaborately constructed tugs, others simple fishing trawlers and luggers similar to those used by shrimp fishermen in the bay waters, and all usually operated by diesel engines of from 60 to 430 horsepower, and designed to combine shallow draught with seaworthiness. Also at variance are the ideas for motivating the long load of barges, many operators pushing the load while others pull or tow, and many prefer to tie tug alongside the leading barge. Pushing is the method generally accepted by several large companies operating in canals and bayous, affording better control of speed and direction and allowing quicker stopping in case of an emergency. These push-boats are often constructed with squared, permanent fenders at the bow, with especially designed apparatus for holding the first barge in position and distributing load of the push over a wide area for better control of direction.

Daily, vast volumes of Louisiana oil move to markets by traversing the numerous winding routes of small canals. South Louisiana operators are aware that the cost of movement by barge, when the unsurmountable hindrances of pipe line construction in the region are considered, offers a sizeable economic advantage over any other method, especially when the advantages of flexibility of the system are realized. Truly, man has made a tool of obstacles, employing them in further development of the oil reserves of a land that formerly was relegated to wild life.



Loading oil into a barge in the Gibson field. A booster pump on the bank helps flow from the large storage tanks, and valves regulate flow into compartments on receiving the barge.

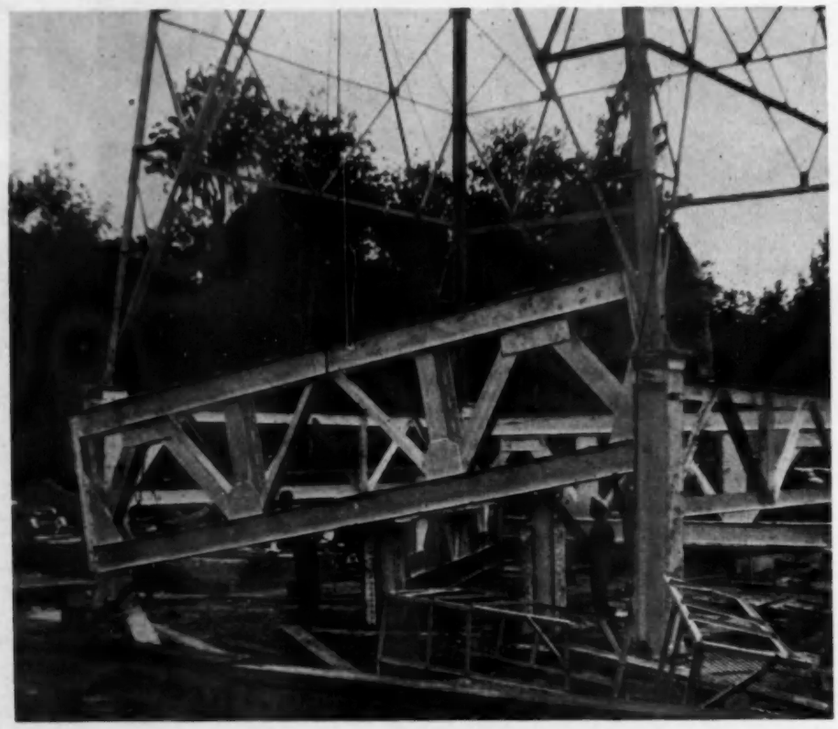
Derrick Substructure

Centralizes Load at Corners

AN UNUSUAL derrick substructure is employed by Shell Oil Company for drilling deep wells in the Gibson field, Louisiana Gulf Coast, conveying all pipe and rotary loads to the four corner columns by means of heavy horizontal trusses that elminate need of rotary or other vertical supporting posts under the derrick, and allowing increased working space around the casinghead valves. Cost of this company's standardized method of concrete flooring for the area under the derrick is reduced, as less concrete is required by this substructure for floor and for the shallow cellar which is made possible by high ceiling clearance. The base has been used on several wells with depths in excess of 11,000 feet, drilling with only the heaviest available equipment through high-pressure formations, and supervising engineers state that its design offers strength equal to conventional substructures, with apparent absorption of rig vibrations.

In eliminating rotary posts, the substructure supports the derrick and the pipe load standing in the derrick or held in the rotary only at the four corners, with the load transferred to the corner posts by means of six all-welded, carefully fabricated trusses, four extending between the derrick legs and two parallel rotary trusses crossing near the center. All trusses are constructed of heavy channels welded to steel plates, and consist of horizontal top and bottom cords with angular and perpendicular bracing between. The trusses extending between derrick corners on the tool ramp and mud pump sides, as well as the two rotary trusses under the derrick, are five feet high, allowing ample clearance to haul in equipment and for persons to walk underneath, although clearance on draw works and window sides is only two feet, three inches. The derrick floor is elevated to 10 feet, providing abundant space for easy manipulation of valves and facilitating washing of the concrete floor. Mud return lines which leave the casinghead comprise the only horizontal piping, while the sole vertical pipe extending through the floor is the rathole conductor pipe, with vertical supports eliminated.

The corner columns are two 15-inch channels joined by means of 18-inch plates, effecting a column larger than the average corner post used for heavy substructures, and of sufficient strength to provide a 1,000,000-pound capacity for the derrick support when erected on adequate grillage footing to distribute load over wide area. Rotary



Heavy all-welded truss is erected in a single piece, and its weight requires special equipment when it is being lifted. Trusses are 30 feet long, made of channels joined by plates.

Four-foot deep cellar permitted by high substructure and elimination of rotary posts effect saving of concrete. The valves are installed above ground level.

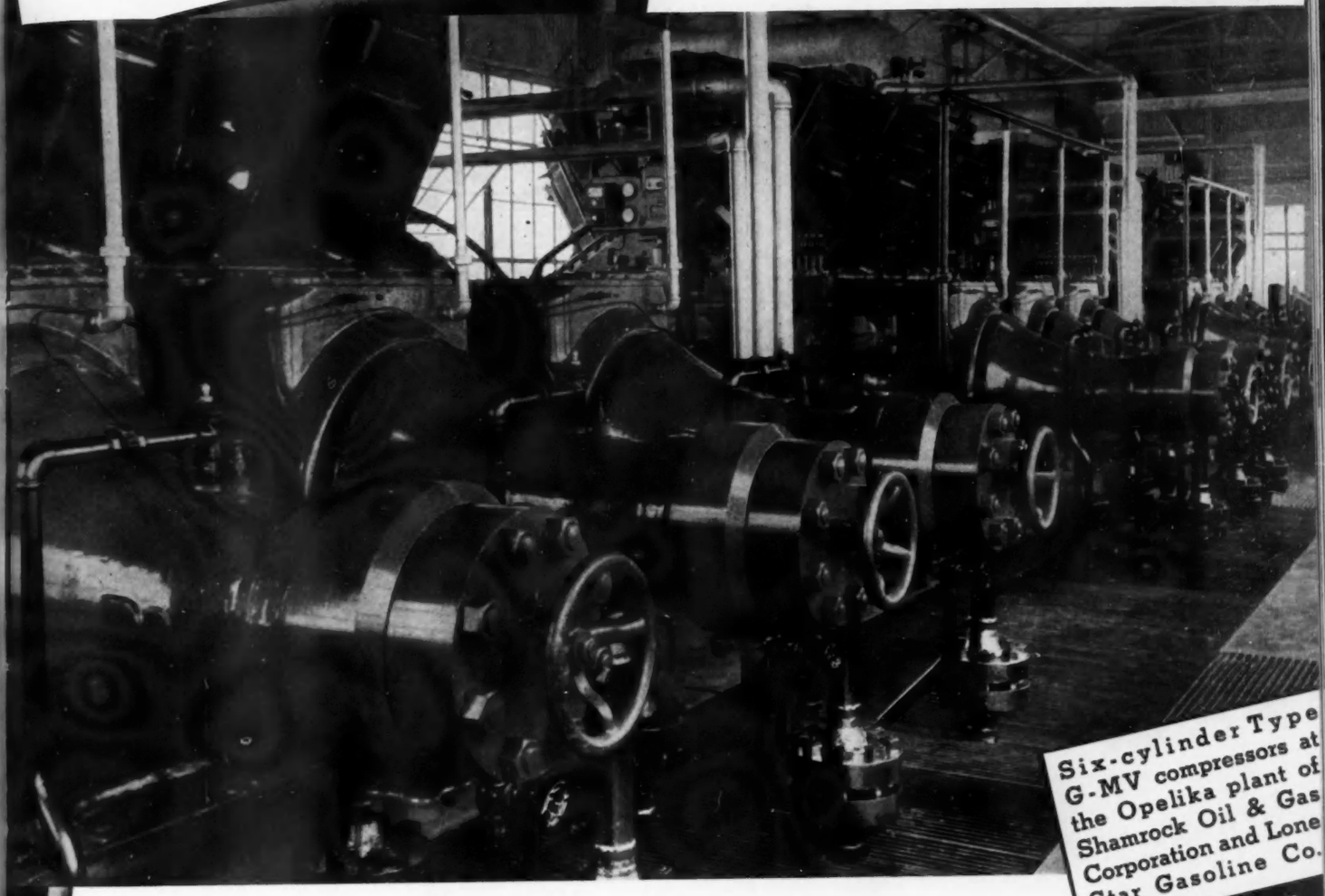
load transmitted by the center trusses has a capacity of 450,000 pounds, while the capacity of the pipe set-back is 200,000 pounds. The rotary is braced directly by the usual type rotary support made of I-beams and channels which transmit load to rotary trusses, while weight of drill pipe or casing in rotary and weight of pipe standing in derrick is transmitted by the rotary trusses to the side trusses and then to the corner columns.

Unusual ceiling height provided by the high substructure permits use of a shallow four-foot cellar that allows ample space for the blow-out preventer, flow-line valves, and other casinghead equipment, as a large portion of this apparatus is placed above the ground level, eliminating need for a more expensive deep cellar, and materially reducing amount of concrete required. Shell Oil uses a large, easily-dug circular cellar of sufficient diameter to furnish unrestricted working space for drilling crew members when necessary to operate valves, and pouring of concrete is facilitated by use of three steel forms, each constituting a 120 degree arc, bolted together to provide a circular form into which the concrete is poured. After the concrete sets, the forms are unbolted and removed. During drilling operations, the cellar is kept free of accumulated water and drilling mud by means of jets provided for their expulsion.

The substructure presents a few difficulties in transportation and rig building expense, as the supporting trusses are 30 feet long and require special apparatus for erection and dismantlement. Bolted to the sturdy corner posts, their weight necessitates service of a dragline to haul trusses away after bolts are withdrawn to allow their removal. Length of trusses presents still another expense item, prohibiting their being galvanized as are other parts of the substructure, as they are too long for the galvanizing process. As a result, they are painted carefully and frequently to guard against the corrosive water and atmosphere often present in the Gulf Coast area.

Concentration of entire load at the corner columns to furnish adequate support for derrick and rotary while at the same time increasing working space under the derrick substantiates Shell's selection of the substructure for deep drilling, while a double economy is effected in digging shallow cellar and reducing concrete volume required for cellar and floor under derrick. Additional benefit is realized by placing much of the casinghead equipment above ground where it is easily accessible in emergencies.

Battery for Today's Job--- G-MV's at Opelika!



Six-cylinder Type G-MV compressors at the Opelika plant of Shamrock Oil & Gas Corporation and Lone Star Gasoline Co.

And what a battery! . . . 600-horsepower Type G-MV compressors, with Cooper-Bessemer single-acting, high-pressure compressor cylinders . . . injecting sixty-million cubic feet of gas back into the formation daily, at discharge pressures well above the 4,000 psi mark. Here, again, compact and powerful Type G-MV's have been chosen for repressuring operations. Again, Cooper-Bessemer forged-steel, single-acting compressor cylinders (designed for 6,000-pound working pressures) have been selected for their remarkable simplicity, high efficiency, and construction features which permit adjustment of clearance for varying pressure conditions.

These "V-angle" compressors and C-B compressor cylinders are an unbeatable combination! Write for Bulletin 332.

THE COOPER-BESSEMER CORPORATION

Mount Vernon, Ohio — PLANTS — Grove City, Penna.

25 West 43rd St., New York City
Investment Bldg., Washington, D. C.
Box 454, Greggton, Texas
201 East 1st St., Tulsa, Okla.
Magnolia Bldg., Dallas, Texas
529 M & M Bldg., Houston, Texas
1501 Arcade Bldg., St. Louis, Missouri
Box 1856, Pampa, Texas
631 Spring St., Shreveport, La.
640 East 61st St., Los Angeles, Cal.

LONGER, EASIER PUMPABILITY

AT HIGH TEMPERATURES AND PRESSURES

GREATER DENSITY, HIGHER STRENGTH, TOO

As wells go deeper, new cementing problems arise. High pressures . . . bottom-hole temperatures above the boiling point of water. And the deeper the well, the heavier the Oil Man's investment. To meet these conditions, Lone Star oil-well cement research laboratories developed 'Texcor', a basic advancement in oil-well cement.

16½-lb. 'Texcor' slurries (40% mixing water) stay pumpable for over 8 hours, at 200° F. . . . a greater safety factor than ever before. And, far from sacrificing strength for pumpability, these 'Texcor' slurries produce over 5000 lbs. in 24 hours, over 6000 lbs. in 48 hours, at 200° F.

Lower initial viscosity, greater ease of pumpability in heavy slurries, low pump pressures—greater density, higher strength in hardened cement.

CHOOSE FROM 4 GREAT CEMENTS

One of four high-quality cements for oil-industry service. Use 'Texcor'† for deepest wells, highest temperatures and pressures . . . 'Starcor'* for deep wells . . . 'Incor'* for wells of moderate depth . . . Lone Star for all-around oil-field service. The extra margin of quality means a lot.

†Trade-Mark
*Reg. U. S. Pat. Off.

4 BASIC ADVANTAGES

1. *Longer pumpability:* In excess of 8 hours, with 40% water (16½-lb. slurry), at 200° F.
2. *Higher strength:* Over 5000 lbs. in 24 hours, over 6000 lbs. in 48 hours, with 16½-lb. slurries, at 200° F.
3. *Lower initial viscosity:* Easier pumpability in heavy slurries . . . low pump pressures.
4. *Greater density:* Saw a 'Texcor' cube in half—notice its denser structure. Greater density, higher strength . . . longer lasting shut-offs!

LONE STAR SYMBOL OF QUALITY SINCE 1900

...Keeping pace with Oil-Industry Progress

LONE STAR CEMENT CORPORATION

Makers of . . . Lone Star . . . 'Incor' . . . 'Starcor' . . . 'Texcor'

Suggested Method of Measuring

Input Profile of Intake Wells

By EUGENE P. BOWLER
Petroleum Engineer, Sloan and Zook Company, Bradford, Pennsylvania

SINCE the innovation of water flooding, one problem which has always confronted the producer is: how, throughout the sand body, is his injected water working? Is it penetrating the entire sand at a fairly constant rate or is much of the water being dissipated through the "looser" section of the sand and inefficiently wending its way to the producing well where it must be lifted to the surface and disposed of? If the latter condition exists, how long will it be economically feasible to withstand the cost of maintaining this inefficient flow of oil-free water through the sand, and pumping it to the surface while waiting for the water to work at a much slower rate throughout the "tighter" sections of the formation?

Sands deposited in nature were formerly sheets of sediment, and are seldom uniform. They usually consist of alternate layers that vary in porosity, permeability and oil and water saturation. During the productive years of the life of a water flood, some streaks of sand are more speedily penetrated by the injected water and the recoverable oil is rapidly flushed out; whereas, other streaks being more difficult for the water to penetrate are not proportionately depleted of oil. Hence production characteristics of the property represent the cumulative effects of all layers in the sand bed.

With the data obtained from core analysis, it might seem theoretically possible to estimate the rate of water intake throughout the sand profile with a reasonable degree of accuracy by proportioning the total measured input for the entire sand, since the rate of intake should, for any given stratum be in direct proportion to its permeability. However, there are several factors that enter the picture that are not directly taken care of by the foregoing equation: (a) the permeability used is dry-air permeability, as determined in routine core analysis; (b) the shot hole contains many cracks and crevices and is not uniform throughout its length; (c) the variation of the horizontal permeability of the sand body; (d) the percent oil and water saturation of the various layers of the sand, which certainly plays an important part in the rate of water migration through these portions, is not uniform. These, together with additional factors of minor importance, are all known to have some bearing on the water-penetration rate. However, to what degree is somewhat problematical and difficult to formulate.

One enterprising oil company brought a representative of an electric logging concern to the Bradford-Bolivar field for the experimental purpose of determining the merits and adaptability of data obtained by this method for use in water-flooded development and operation. The most interesting feature of these electrical tests is that they are apparently able to indicate the "effective" permeability of sand, i.e., the actual rate at which different streaks of the sand take water in relation to the theoretical indications as given by permeability values determined in the laboratory. Electric logs correlate millivolts, which is a unit of measurement of the electrical potential set up by the infiltration of liquids into the sand to millidarcies as measured in the laboratory.

Throughout parts of the sand body it is very apparent that the tendency of the SPD log (spontaneous polarization differential) has the same general shape as the permeability log. However, the variation from maximum to minimum points on the SPD graph are much less pronounced than on the permeability graph, probably giving a truer picture of the manner in which the water is actually entering the sand body. Throughout other sections of the sand, especially those of maximum oil saturation, there is sometimes found to be very little correlation between the "indicated" permeability as measured in the laboratory and the "effective" permeability as measured by the electrical logging process. In some cases, the electrical method would indicate the highly permeable sections of the sandy body to be taking very little or no water at all. Why this anomaly exists, of course, can only be theorized; however, this non-agreement in results indicates that any determination of the exact amount of water entering each suceeding section of the sand body by core analysis or by electrical logging is still somewhat uncertain and probably an approximation at best.

Practical and Economical Method

The method of measuring the input profile of a well as outlined in this paper was developed in an attempt to give the producer a practical and economical method by which he may determine exactly the amount of water entering each succeeding portion of his sand body. An exact replica of the field conditions as illustrated in this paper has been developed in a laboratory set-up and each principle explained herewith has been tried and found to be both theoretically and practically sound insofar as this model arrangement is concerned.

The principle upon which this method is based is the use of two immiscible fluids such as water and crude oil. It consists essentially of lowering a string of pipe inside the water-well tubing until the lower end of the pipe extends down into the pocket below the bottom of the sand. The lower end of the pipe is open. At the surface, the top of the string of pipe is connected to the water line and the well is allowed to maintain its normal input per day through the inner string. The 2- or 1½-inch water-well tubing at the well head is now connected to a high-pres-

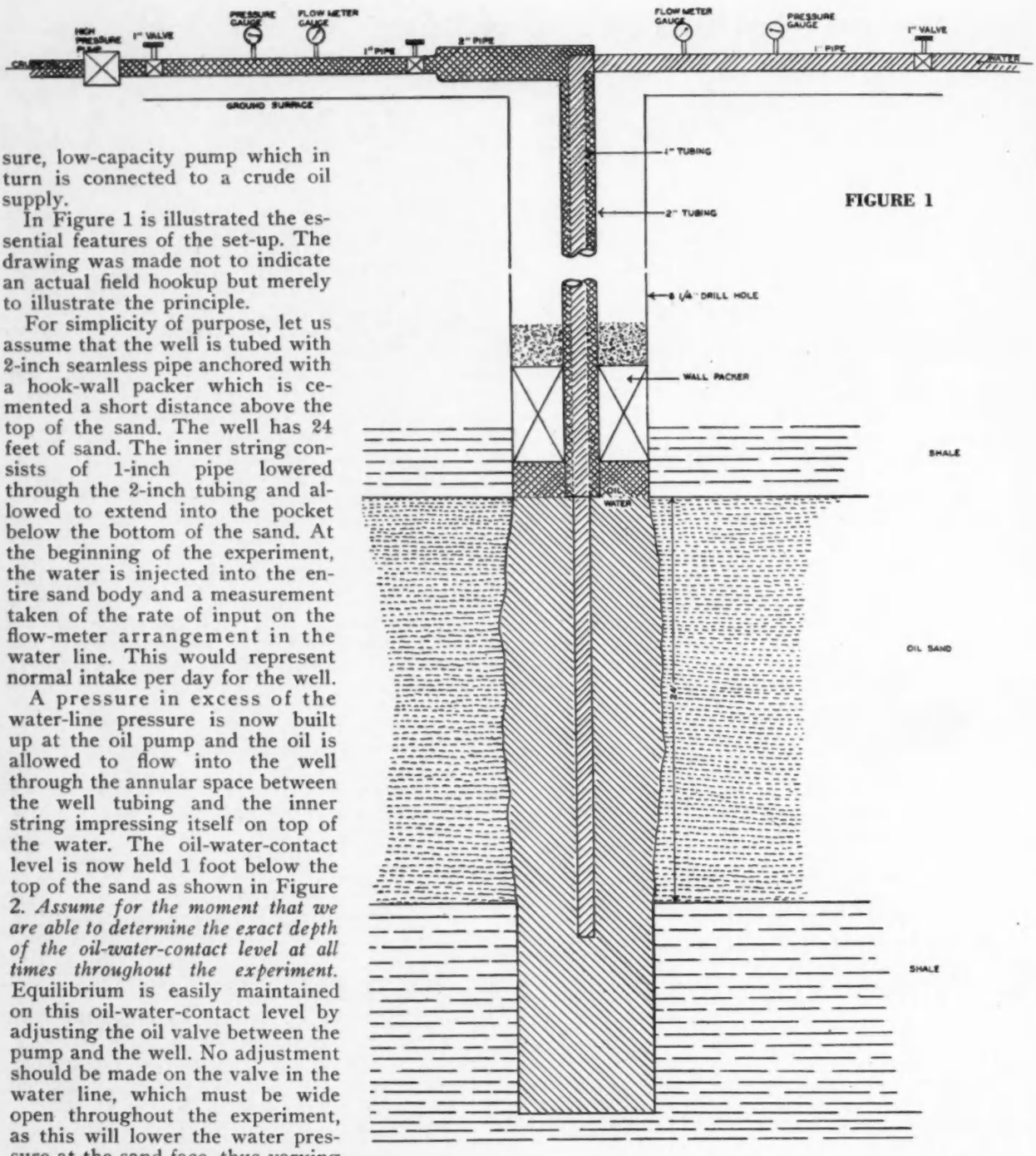


FIGURE 1

sure, low-capacity pump which in turn is connected to a crude oil supply.

In Figure 1 is illustrated the essential features of the set-up. The drawing was made not to indicate an actual field hookup but merely to illustrate the principle.

For simplicity of purpose, let us assume that the well is tubed with 2-inch seamless pipe anchored with a hook-wall packer which is cemented a short distance above the top of the sand. The well has 24 feet of sand. The inner string consists of 1-inch pipe lowered through the 2-inch tubing and allowed to extend into the pocket below the bottom of the sand. At the beginning of the experiment, the water is injected into the entire sand body and a measurement taken of the rate of input on the flow-meter arrangement in the water line. This would represent normal intake per day for the well.

A pressure in excess of the water-line pressure is now built up at the oil pump and the oil is allowed to flow into the well through the annular space between the well tubing and the inner string impressing itself on top of the water. The oil-water-contact level is now held 1 foot below the top of the sand as shown in Figure 2. *Assume for the moment that we are able to determine the exact depth of the oil-water-contact level at all times throughout the experiment.* Equilibrium is easily maintained on this oil-water-contact level by adjusting the oil valve between the pump and the well. No adjustment should be made on the valve in the water line, which must be wide open throughout the experiment, as this will lower the water pressure at the sand face, thus varying the normal rate of input for the sand.

The oil is now entering the upper 1 foot of sand in place of the water, and acts much in the same manner as a packer set 1 foot below the top of the sand, insofar that it prohibits water penetration above this point. A measurement is now taken on the rate of water intake as read on the flow meter. The drop from the initial input will be the amount of water that this 1 foot of sand would normally take. The oil-water contact level is now lowered to a depth of 2 feet below the top of the sand and a reading is again taken on the flow meter which will indicate another drop in input corresponding to the amount of water normally taken by the second 1-foot-sand section. This same procedure is continued throughout the entire sand body; the oil-water-contact level held at each succeeding 1-foot level and a water-injection rate read on the flow meter at each of these successive points. The drop in total water input for each of these lowerings of the oil-water level will be the amount of water that each succeeding 1-foot section of sand would take under normal lease-operating conditions, since the water pressure at the sand face will always be the same throughout the experiment and equal to the normal operating pressure.

To illustrate this with an example, assume the well to be taking 120 barrels of water per day at a line pressure of 500 pounds per square inch. The oil pump is allowed to build up a pressure in

"WE HAVE FEWER 'ROUND TRIPS' WITH THE REED SE-2 ROCK BIT"
Says, Boyd Bedwell, Tool Pusher in Illinois
One of a toolpusher's major "headaches" is excessive round trips and in formations such as: ANHYDRITE, HARD LIME ROCK, HARD SHALE and BROKEN LIME ROCK the Reed "SE-2" has Mr. Bedwell's hearty endorsement for staying on bottom longer and for making fast, full gauge hole.
The Reed SE-2 has been designed for the medium hard formations which chip easily and its extreme chipping action on bottom assures greater footage and drilling speed.
The use of lighter weights is recommended to aid this chipping action and to assure the exceptional digging qualities of this bit.
Made by EXPERIENCED EXPERTS for EXPERIENCED EXPERTS

REED ROLLER BIT COMPANY

REED ROTARY DRILLING TOOLS
SPEED - ECONOMY - DURABILITY

POST OFFICE BOX 2119 HOUSTON, TEXAS

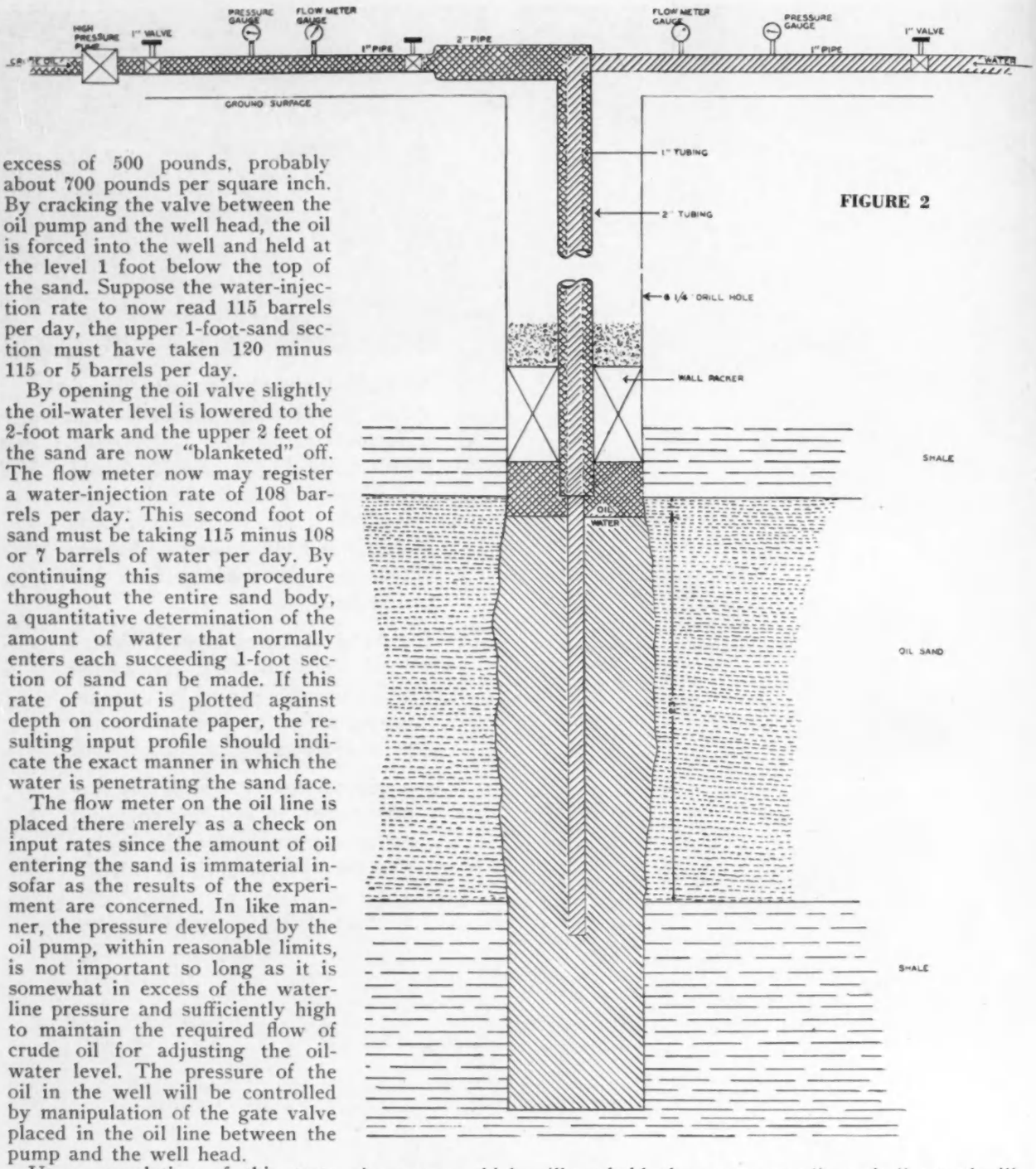


FIGURE 2

excess of 500 pounds, probably about 700 pounds per square inch. By cracking the valve between the oil pump and the well head, the oil is forced into the well and held at the level 1 foot below the top of the sand. Suppose the water-injection rate to now read 115 barrels per day, the upper 1-foot-sand section must have taken 120 minus 115 or 5 barrels per day.

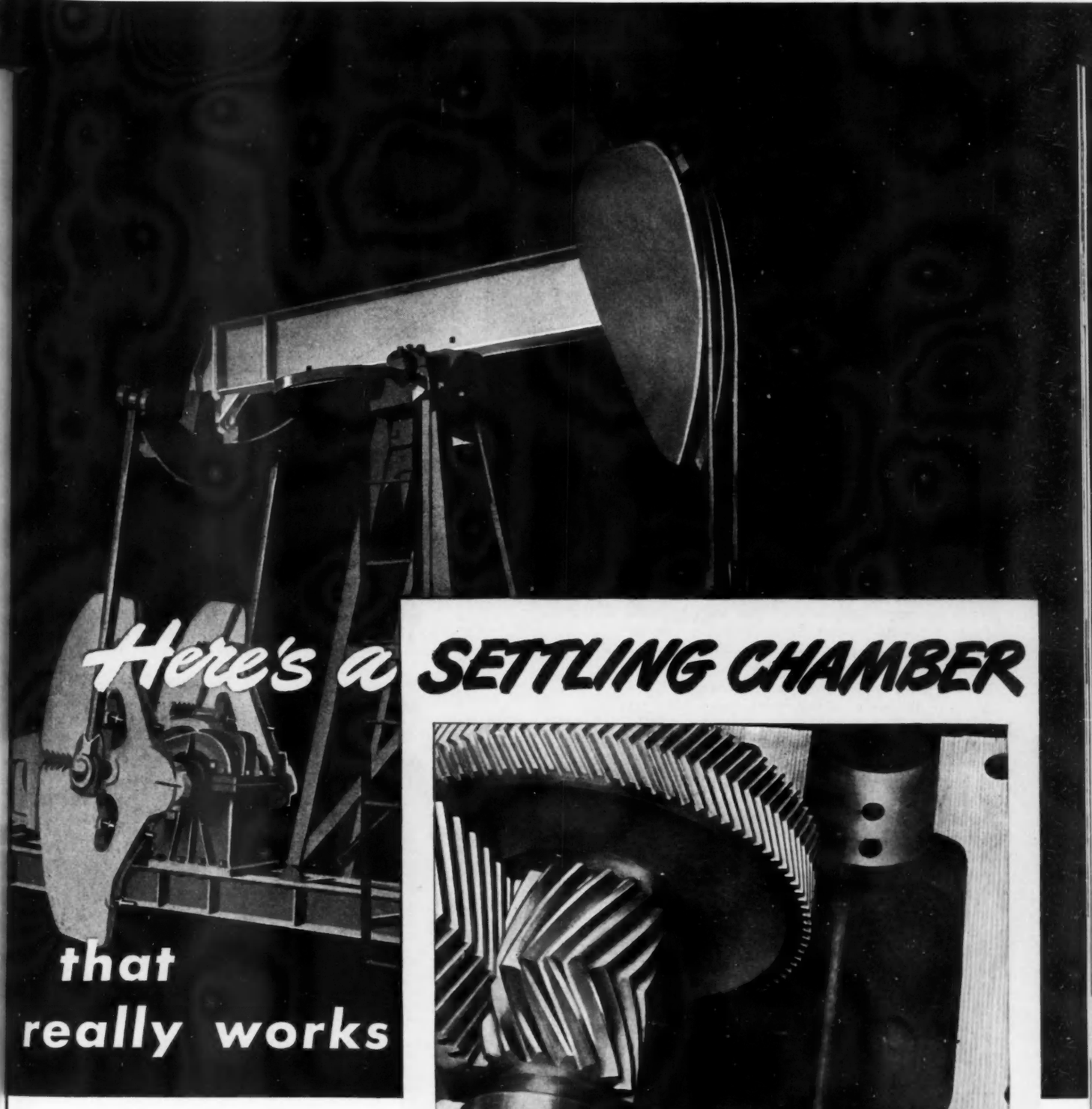
By opening the oil valve slightly the oil-water level is lowered to the 2-foot mark and the upper 2 feet of the sand are now "blanketed" off. The flow meter now may register a water-injection rate of 108 barrels per day. This second foot of sand must be taking 115 minus 108 or 7 barrels of water per day. By continuing this same procedure throughout the entire sand body, a quantitative determination of the amount of water that normally enters each succeeding 1-foot section of sand can be made. If this rate of input is plotted against depth on coordinate paper, the resulting input profile should indicate the exact manner in which the water is penetrating the sand face.

The flow meter on the oil line is placed there merely as a check on input rates since the amount of oil entering the sand is immaterial insofar as the results of the experiment are concerned. In like manner, the pressure developed by the oil pump, within reasonable limits, is not important so long as it is somewhat in excess of the water-line pressure and sufficiently high to maintain the required flow of crude oil for adjusting the oil-water level. The pressure of the oil in the well will be controlled by manipulation of the gate valve placed in the oil line between the pump and the well head.

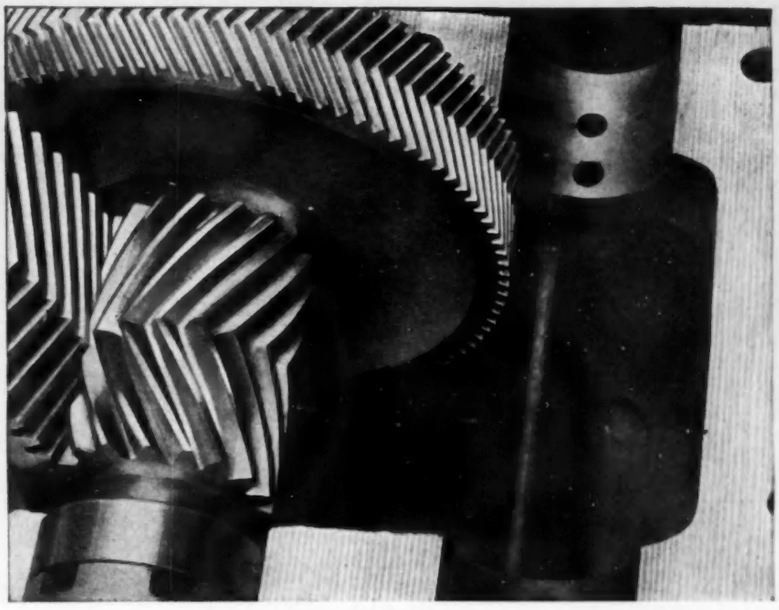
Upon completion of this test; that is, when the oil-water-contact level has been lowered to such a point that only oil is being injected into the sand, the oil and water are shut off at the surface and the pressure relieved at the sand face. The oil that has been injected into the sand throughout the experiment, which should not be more than 15 barrels at the very maximum assuming three hours for the duration of the test, is now allowed to back flow out of the well and through a by-pass arrangement to its source which will probably be a 40 barrel tank. The oil remaining in the shot hole and in the annular space between the inner and outer string of pipe is flushed out of the well and back into the tank by water injected through the inner string. In this way, a relatively small amount of crude oil will be used to carry out the experiment.

In like manner, consider an anchor-packer arrangement, with the well tubing extending to the bottom of the pocket and the water passing out of the tubing through open couplings similar to the illustration in Figure 3.

Before starting the foregoing experiment on a well such as this which is taking water through open couplings, it would be necessary to lower into the well a ripping or cutting device to split the tubing opposite the sand face at about 1- or 2-foot intervals. This type of hookup would not be as ideal as the type in which the sand face is exposed. However, the test could be carried out through these perforations in exactly the same



Here's a SETTLING CHAMBER that really works



It's easy to see from the picture above why the Bethlehem pumping unit settling chamber is so outstanding. Note how it's placed directly under the position of the high-speed pinion, so that the pinion will throw water, grit, and other impurities into the settling chamber's mouth. A separate drain at the bottom allows easy removal of the grit and water.

In this way, the Bethlehem settling chamber collects more impurities, more water from the oil and assures longer life for those smooth, machined surfaces of reducer teeth and bearings.

Other outstanding features of Bethlehem Pumping Units:

No welds at critically-stressed sections.
100 per cent roller bearing in gear reducer.
Huge shafts, heat-treated and ground to size.
Forged-steel heat-treated gears and pinions.
*Rubber mounting of upper pitman assembly.
Built-in true alignment by machining, not shims.
*Double-cone adjustable equalizer bearing.
Safety-plus: rounded structure corners . . . central lubrication . . . ladder . . . 100 per cent belt covers . . . light counterweight sections convenient to adjust . . . ample servicing clearances.

**Optional*

BETHLEHEM SUPPLY COMPANY

BETHLEHEM STEEL

Offices or Stores—*Illinois:* Grayville, Salem, St. Elmo; *Kansas:* Chase, Great Bend, Russell, Witchita; *Louisiana:* Houma, Lake Charles, New Iberia, Shreveport; *New Mexico:* Artesia, Hobbs; *Oklahoma:* Fittstown, Oklahoma City, Seminole, Tulsa, Wewoka; *Texas:* Alice, Borger, Corpus Christi, Dallas, Freer, Ft. Worth, Houston, Kemp City, Kilgore, La Ward, Midland, Odessa, Pampa, Wichita Falls.

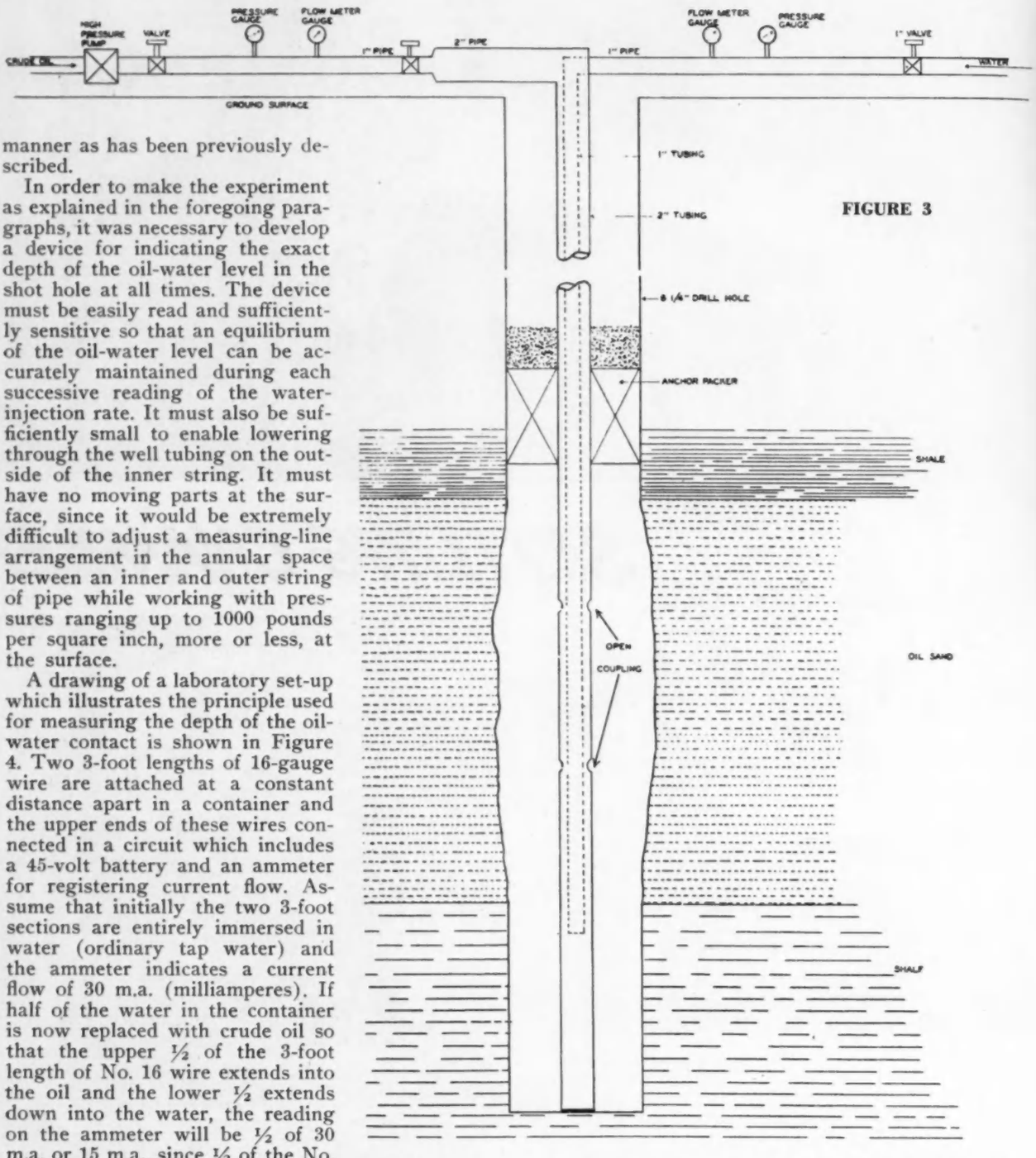


FIGURE 3

manner as has been previously described.

In order to make the experiment as explained in the foregoing paragraphs, it was necessary to develop a device for indicating the exact depth of the oil-water level in the shot hole at all times. The device must be easily read and sufficiently sensitive so that an equilibrium of the oil-water level can be accurately maintained during each successive reading of the water-injection rate. It must also be sufficiently small to enable lowering through the well tubing on the outside of the inner string. It must have no moving parts at the surface, since it would be extremely difficult to adjust a measuring-line arrangement in the annular space between an inner and outer string of pipe while working with pressures ranging up to 1000 pounds per square inch, more or less, at the surface.

A drawing of a laboratory set-up which illustrates the principle used for measuring the depth of the oil-water contact is shown in Figure 4. Two 3-foot lengths of 16-gauge wire are attached at a constant distance apart in a container and the upper ends of these wires connected in a circuit which includes a 45-volt battery and an ammeter for registering current flow. Assume that initially the two 3-foot sections are entirely immersed in water (ordinary tap water) and the ammeter indicates a current flow of 30 m.a. (milliamperes). If half of the water in the container is now replaced with crude oil so that the upper ½ of the 3-foot length of No. 16 wire extends into the oil and the lower ½ extends down into the water, the reading on the ammeter will be ½ of 30 m.a. or 15 m.a., since ½ of the No. 16 wire has been cut out of the liquid circuit by the non-conducting crude oil. That is, the flow of electricity at any given voltage is approximately in direct proportion to the amount of wire exposed to the water. In like manner, if ⅔ of the length of wire or 2 feet of wire were submerged in water the amperage reading would be ⅔ of 30 or 20 m.a. and if ⅓ of the length of wire or 1 foot were submerged in water the reading would be ⅓ of 30 or 10 m.a. If all of the wire were submerged in oil and none in water the amperage reading would be zero.

The reason for this is easily seen upon inspection of the fundamental electrical equations:

Ohm's law states that when an e.m.f. is applied to the terminals of a conductor a current is produced which is directly proportional to the e.m.f. and is inversely proportional to the resistance of the conductor:

(1)

$$I = \frac{E}{R}$$

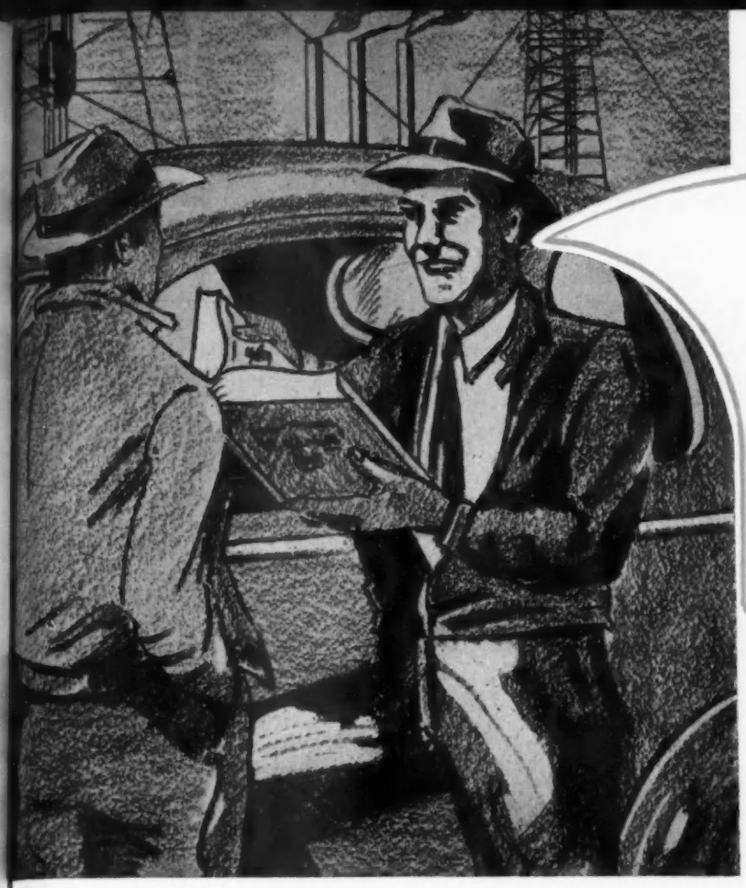
where I = the current in amperes
E = the e.m.f. in volts
R = the resistance in ohms

The resistance of a conductor varies directly as its length, and inversely as its sectional area; it also depends on the material of which the conductor is made:

(2)

$$R = P\frac{L}{A}$$

where L = the length of the conductor
A = the sectional area
P = the specific resistance or resistivity of the material



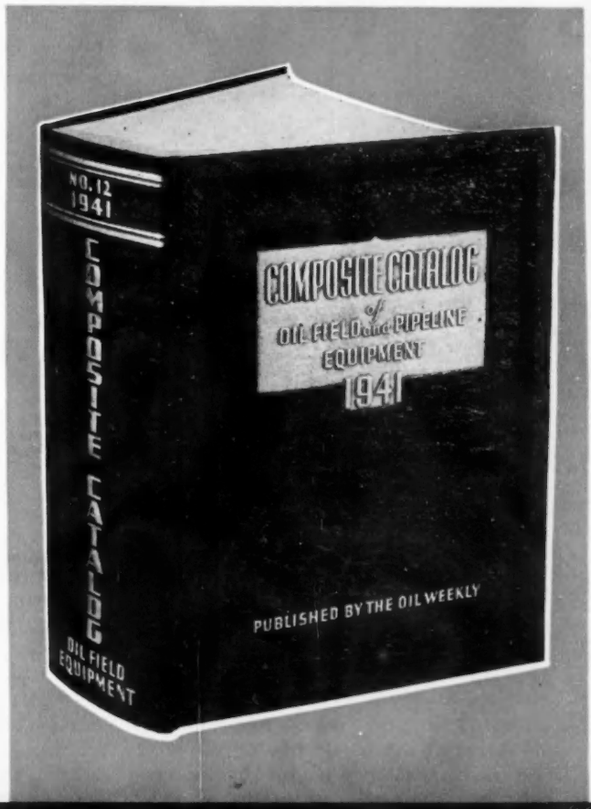
YOU KNOW I COULDN'T DO WITHOUT THIS BABY-IT'S A REAL TIME SAVER...

WHEN YOUR CAR IS *Your Office*

. . . all the more reason why you shouldn't be without your copy of The 1941 Composite Catalog.

Many times out in the field questions arise regarding applications of certain equipment—the quickest and surest way to solve such questions is to consult a copy of The Composite Catalog. Its more than 2200 pages of actual catalog material constitute a "veritable library of information."

Save time! When buying or specifying equipment use The Composite Catalog—it is complete, convenient and reliable.



You'll find it . . . quickly . . . in

THE COMPOSITE CATALOG

Substituting the value of R in equation (1)

$$I = \frac{EA}{PL}$$

in our case E, P, and L are constant, since

E is the e.m.f. produced by the 45 V. battery

P is the specific resistance of the water

L is the distance between the two attached wires, therefore I-KA where K is a constant which includes E. P, and L

That is, I, the current flow as read on the ammeter, is proportional to the area of the wire exposed to the water, and, since the area of the wire is constant throughout its length, I is proportional to the length of wire exposed to water.

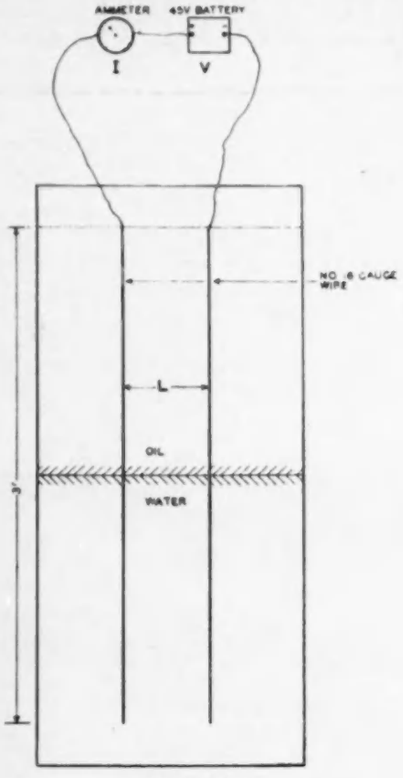


FIGURE 4

Actually in our case the equation for the current flow should read

$$I = \frac{E}{R + r}$$

where R is the resistance of the water and r is the constant resistance of the wire

However, r is very small in relation to R and, therefore, for all practical purposes, this value can be disregarded without appreciably affecting the accuracy of the foregoing determination.

There are numerous ways of utilizing this method to indicate the oil-water-contact level in the shot hole, but the simplest and most accurate method decided upon was to run a standard telephone cable composed of 16 or 17 insulated strands of No. 22-gauge wire in the annular space between the water-well tubing and the inner string of pipe; the cable to be jacketed with an extruded plastic or with a neoprene covering, both of which are resistant to oil and water at high pressure and will also withstand abrasion. The outside diameter of the cable will not exceed ½ inch. The bottom section of the cable is split and wrapped in such a way that a single strand is taken off at each 3-foot interval. The arrangement is shown in Figure 5 and Figure 6. Each of these strands will be connected to a 3-foot exposed length of No. 16-gauge wire held against the insulated pipe by nonconducting clips. The pipe opposite the sand face will be insulated by coating with moisture-proof varnish and wrapping once with a covering of cambric tape. The individual lengths of No. 16 wire will not in any way make direct contact with each other. On the opposite side of the pipe will be strung an exposed continuous single ground wire to complete the circuit. In this way, each 3-foot section of wire will be cut out of the circuit upon passing of the oil-water contact level, and the approximate location of this oil-water contact level along these individual 3-foot lengths can be determined directly by ammeter reading at surface.

The panel board as shown in Figure 6 has 17 contact points to which the leads from the cable are connected. Each one of these 17 points corresponds to the 17 leads taken from the cable at the bottom of the well. Numbering from left to right, the first contact point on

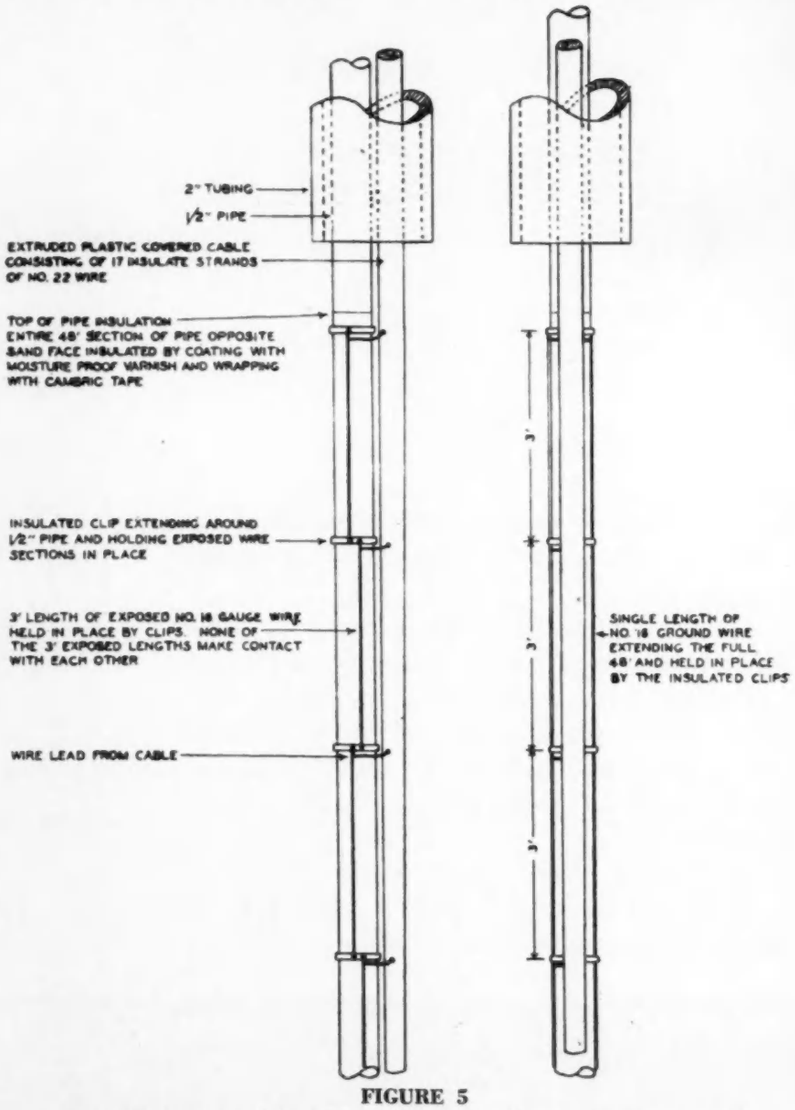

2" TUBING
½" PIPE
EXTRUDED PLASTIC COVERED CABLE CONSISTING OF 17 INSULATE STRANDS OF NO. 22 WIRE
TOP OF PIPE INSULATION ENTIRE 48' SECTION OF PIPE OPPOSITE SAND FACE INSULATED BY COATING WITH MOISTURE PROOF VARNISH AND WRAPPING WITH CAMBRIC TAPE
INSULATED CLIP EXTENDING AROUND ½" PIPE AND HOLDING EXPOSED WIRE SECTIONS IN PLACE
3' LENGTH OF EXPOSED NO. 16 GAUGE WIRE HELD IN PLACE BY CLIPS. NONE OF THE 3' EXPOSED LENGTHS MAKE CONTACT WITH EACH OTHER
WIRE LEAD FROM CABLE
SINGLE LENGTH OF NO. 16 GROUND WIRE EXTENDING THE FULL 48' AND HELD IN PLACE BY THE INSULATED CLIPS

FIGURE 5

Detailed drawing of device used to indicate oil-water level in shot hole

STEEL MOVES FUEL *Quickly*-FOR DEFENSE

National Defense demands fuel—oil, gas and gasoline—and more of each—for power, for heat.

And fuel must be transported from its source of supply—*QUICKLY*—to the place of use. This calls for pipe lines—and more pipe lines—arteries of steel to carry the energy-giving fuel vital to defense.

Forming a criss-crossing network from well or plant to city, thousands of miles of Republic Electric Weld Line Pipe now insure dependable transportation for oil, gas and gasoline.

But many more miles must be constructed without delay. And Republic, with its increased facilities for the production of tubular goods—facilities that make it the world's largest producer of Electric Weld Line Pipe, Casing and Tubing—is working day and night to supply more pipe—better pipe—to strengthen National Defense.

Write for a copy of the book, "The Pipe of Progress." It will tell you how modern manufacturing processes impart exclusive advantages to Republic Electric Weld Products.

REPUBLIC STEEL CORPORATION

General Offices: Cleveland, Ohio

Howard Supply Company • Los Angeles, California
Republic Supply Company • Houston, Texas

Berger Manufacturing Division • Culvert Division
Niles Steel Products Division • Steel and Tubes Division
Union Drawn Steel Division • Truscon Steel Company

PREPAREDNESS BEGINS AT HOME

Early in the Defense Program it was evident that Republic's peacetime capacity for electric furnace steel would prove inadequate.

Anticipating this, late in 1939 we began to expand our electric furnace capacity—at that time 146,000 tons a year. New furnaces were installed with such rapidity that Republic's annual output of electric furnace steel now exceeds 600,000 tons.

Orders have been placed for two more 50-ton furnaces, which will further expand this capacity to approximately 720,000 tons.

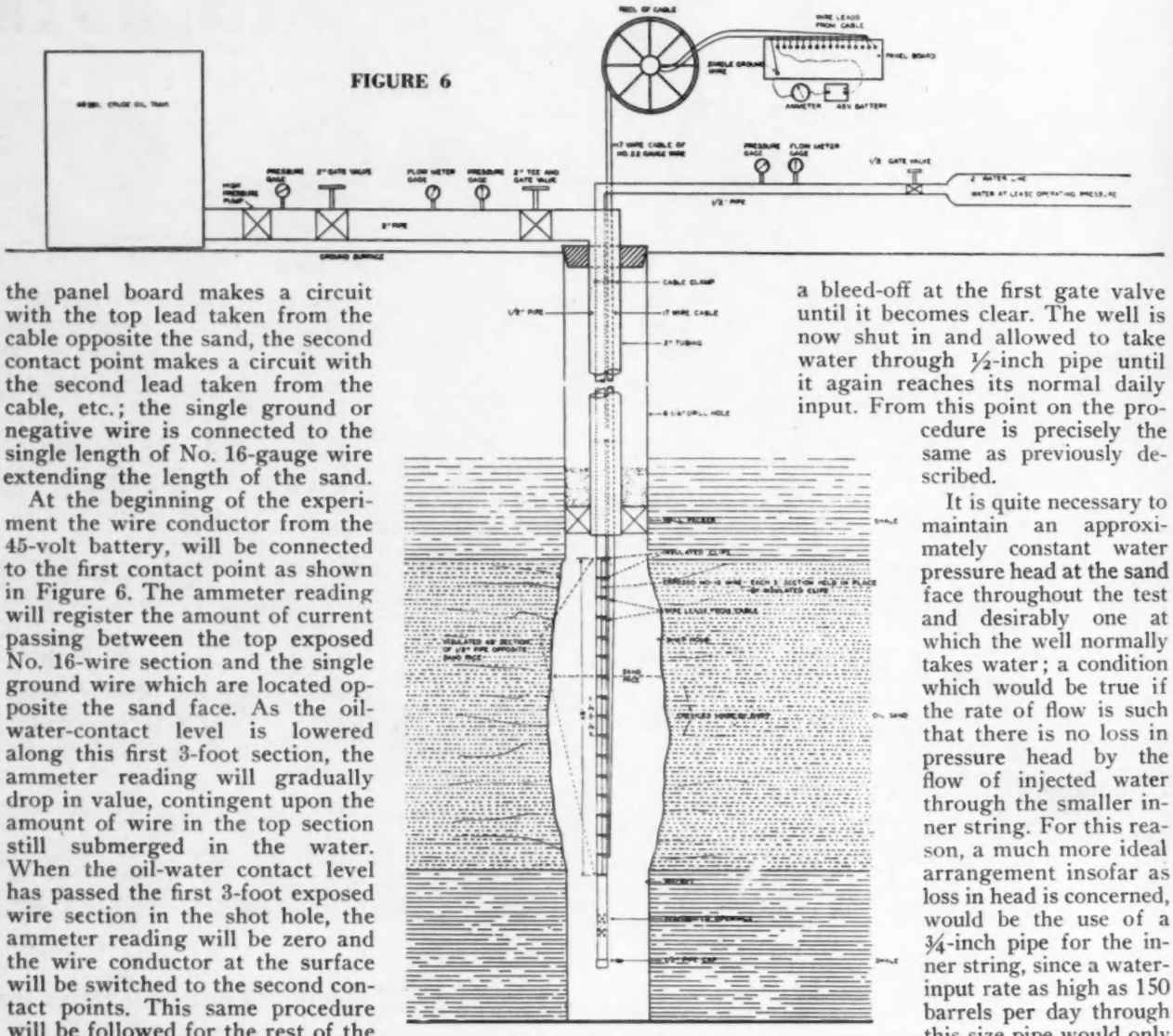
Republic has always tried to look ahead, believing that Preparedness Begins at Home.

R. J. Wysor
PRESIDENT

REPUBLIC *Electric Weld*

LINE PIPE . . . NORMALIZED CASING AND TUBING

FIGURE 6



the panel board makes a circuit with the top lead taken from the cable opposite the sand, the second contact point makes a circuit with the second lead taken from the cable, etc.; the single ground or negative wire is connected to the single length of No. 16-gauge wire extending the length of the sand.

At the beginning of the experiment the wire conductor from the 45-volt battery, will be connected to the first contact point as shown in Figure 6. The ammeter reading will register the amount of current passing between the top exposed No. 16-wire section and the single ground wire which are located opposite the sand face. As the oil-water-contact level is lowered along this first 3-foot section, the ammeter reading will gradually drop in value, contingent upon the amount of wire in the top section still submerged in the water. When the oil-water contact level has passed the first 3-foot exposed wire section in the shot hole, the ammeter reading will be zero and the wire conductor at the surface will be switched to the second contact points. This same procedure will be followed for the rest of the 3-foot exposed sections; each time the oil level passes one of these sections, the wire conductor from the battery will be switched to the next contact point.

A complete proposed field hook-up is shown in Figure 6. The well is equipped with a hook-wall packer and 2-inch seamless tubing. The well contains 48 feet of sand and 35 feet of pocket.

A string of ½-inch pipe with a perforated joint on the bottom is lowered through the 2-inch tubing, and allowed to extend into the pocket below the sand. It is suggested that ½-inch new pipe be used in place of a larger size string since this pipe is sufficiently large to take care of any normal input in the Bradford-Bolivar field without appreciable loss in pressure head; it is also small enough to allow the cable (slightly less than ½-inch) clamped tightly to its outside surface to be lowered at the same time; and it affords sufficient room in the event scale or calcium carbonate deposition has formed on the inside surface of the water-well tubing which would decrease its inside diameter.

Upon completion of the lowering operations of the inner string, the last joint of ½-inch pipe is cut and threaded to the exact calculated length so that the device used to indicate the oil-water level in the shot hole is opposite the sand face, and the well-head connections are hooked up, as shown in Figure 7. The ½-inch pipe is now connected to the lease water line and the 2-inch water-well tubing at the well head is connected to a low-capacity, high-pressure pump which in turn is connected to the crude oil tank, as shown in Figure 6. The water is now turned on and allowed to circulate down through the ½-inch pipe and back through the 2-inch, flowing out of a bleed-off at the first gate valve until it becomes clear. The well is now shut in and allowed to take water through ½-inch pipe until it again reaches its normal daily input. From this point on the procedure is precisely the same as previously described.

It is quite necessary to maintain an approximately constant water pressure head at the sand face throughout the test and desirably one at which the well normally takes water; a condition which would be true if the rate of flow is such that there is no loss in pressure head by the flow of injected water through the smaller inner string. For this reason, a much more ideal arrangement insofar as loss in head is concerned, would be the use of a ¾-inch pipe for the inner string, since a water-input rate as high as 150 barrels per day through this size pipe would only create a loss in head within the probable range of error of the experiment. However, a pipe of this size would not provide enough space for a cable to be strung along its outside surface without incurring the danger of excessive abrasive action from the rough, scaly surface of the old 2-inch tubing on the cable during lowering and raising operations, regardless of the advertised strength and durability of the extruded plastic covering. On the other hand, a ½-inch string would provide ample space to allow the cable to be wrapped with a coating of friction tape at the point where it passes over a collar on the inner string to protect it against the abrasive action of the outer pipe. But the loss in head for inputs in excess of 100 barrels per day through ½-inch pipe would be over 5 to 8 percent depending on the injection pressure and amount of pipe; an appreciable error. This

Adaptable ... SURE!

ALLIS-

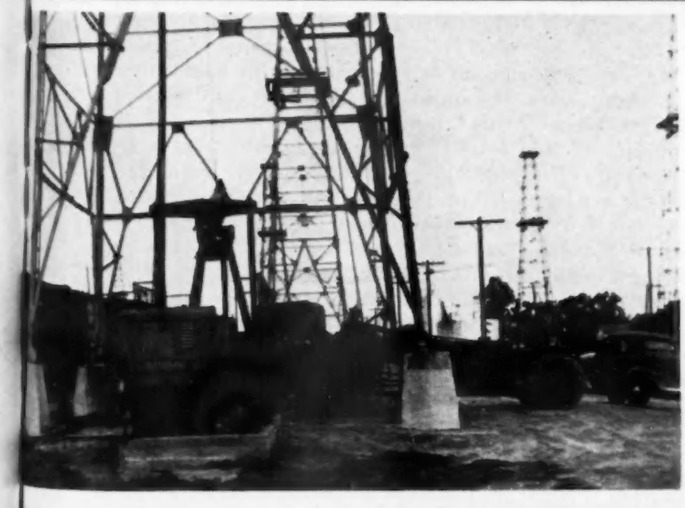
Here are power engines that operate with equally high efficiency in coastal oil fields, the great Mid-Continent or the Rockies. You can depend on Allis-Chalmers Engines to maintain proper operating efficiency at any oil field altitude. They burn the fuel that's most *available* or *cheapest* — *natural gas, gasoline or distillate.*

Burn Most Available Fuel!

CHALMERS

Check the oil fields throughout the country and almost invariably you'll find Allis-Chalmers, High Torque, Slow Speed, Heavy Duty Power Engines on the tough power jobs. Operators know they can depend on them for pumping wells, running mud pumps, driving pipe line and refinery pumps, and pulling electric generators, etc.

Does Many Oil Field Jobs!



ENGINES

Allis-Chalmers engines are available in five standard sizes—a correct size for the majority of oil field power installations. When a job requires power greater than the largest A-C Engine, many operators have found it more practical and economical to combine two A-C Engines.

Model L — Torque 590 ft. lbs.
Model U — Torque 200 ft. lbs.
Model E — Torque 400 ft. lbs.
Model W — Torque 128 ft. lbs.
Model B — Torque 74 ft. lbs.

Write for complete information.

FRED E. Cooper

Hale Station, TULSA, OKLAHOMA
PHONE 7191 BOX 1890
BRANCH—9619 South Main St. - - - - - - - Los Angeles
BRANCH—1418 Franklin St. - - - - - - - - - - Houston

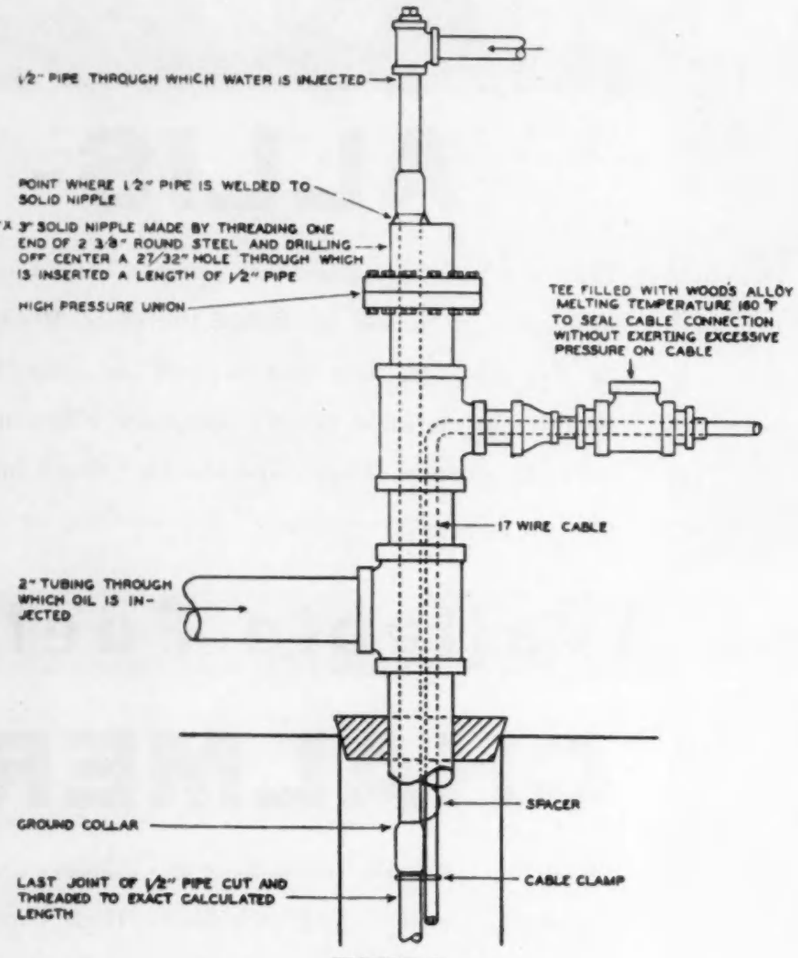

½" PIPE THROUGH WHICH WATER IS INJECTED
POINT WHERE ½" PIPE IS WELDED TO SOLID NIPPLE
2" X 3" SOLID NIPPLE MADE BY THREADING ONE END OF 2 3/8" ROUND STEEL AND DRILLING OFF CENTER A 27/32" HOLE THROUGH WHICH IS INSERTED A LENGTH OF ½" PIPE
HIGH PRESSURE UNION
TEE FILLED WITH WOODS ALLOY MELTING TEMPERATURE 160 °F TO SEAL CABLE CONNECTION WITHOUT EXERTING EXCESSIVE PRESSURE ON CABLE
17 WIRE CABLE
2" TUBING THROUGH WHICH OIL IS INJECTED
SPACER
GROUND COLLAR
CABLE CLAMP
LAST JOINT OF ½" PIPE CUT AND THREADED TO EXACT CALCULATED LENGTH

FIGURE 7
Detailed drawing of well-head hookup

error, of course, would only be apparent during the early stages of the experiment as the water input would gradually drop to a range in which the loss in head would be negligible. The error would also be spread out over each 1-foot section.

There are two methods whereby the loss in pressure head for water flows in excess of 100 barrels per day through ½-inch pipe could be compensated for, since the loss in head for a given size pipe at a known rate of flow for a definite distance can be approximated quite accurately from ordinary flow tables. The simplest method would be to correct the input for each 1-foot section of sand to the normal injection pressure as the input rate for the sand is in direct proportion to the injection pressure of the sand face. This correction would only be necessary during the early stages of the experiment. The other method would be to reduce the input-water pressure a predetermined amount throughout the experiment either by throttling the gate valve on the water line or by inserting a water-pressure regulator in the line prior to the test. In this manner a constant water pressure could be maintained during the test at the sand face; but on the other hand, it would indicate an injection rate at a pressure lower than the normal lease-operating pressure. However, the purpose of the experiment; i.e., to measure the input profile of a well would be carried through.

In making the determination on a well equipped with 1½-inch tubing the lowering of the inner string and the attached cable is more difficult to accomplish than in a well equipped with 2-inch owing to less available space within the tubing. The outside diameter of the collars on the ½-inch pipe are 1.085 inches, whereas the inside diameter of new 1½-inch tubing is 1.610 inches, leaving a space slightly in excess of ½-inch. The overall diameter of an extruded plastic-covered 17-wire cable is slightly less than ½-inch and that of an 8-wire cable slightly more than ¼-inch.

By using the same correction factors recommended for high rates of water flow through ½-inch pipe, a ⅜-inch string of new pipe could even be used for normal input rates in a well equipped with 1½-inch tubing which would allow additional space within the tubing. However, this ⅜-inch pipe is not recommended since it seems very possible that a pipe as small and as light as ½-inch could be introduced through a 1½-inch tubing with sufficient care to allow either a single cable or two smaller size cables tightly attached to its outside surface to be lowered and raised without excessive abrasive action on the cable. The cable is capable of being squeezed together somewhat without harm.

It might also be suggested that all the connections between the well head and the lease water line be 1-inch to eliminate as much friction loss as possible. However, this size pipe is not indicated in the diagram.

The diagram, as illustrated in Figure 6, shows the oil-water-level-indicating device to be the exact length as the sand face, which was assumed to be 48 feet. It is not necessary that this precise condition exist. If the end of the indicating device should extend opposite the shale above or below the sand, a reading on the ammeter would indicate the oil-water level at these points, but the flow meter on the water line would show no water penetrations at these indicated levels.

In like manner, if there were more sand in the well than could be spanned by the device, it would merely be necessary to place the top of the exposed wire sections approximately opposite the top of the sand and make the determinations as described until a point about 3 feet above the bottom of the indicating device is reached. At this point, injection operations would be discontinued and the pressure at the sand face relieved.

The fittings at the well head would be disconnected and one or two accurately measured joints of ½-inch pipe inserted into the string, thereby lowering the top of the exposed wire sections approximately opposite the point at which injection operations ceased. Upon replacing the well head assembly and allowing the water pressure to build up to its normal state, the exact level at which injection operations were stopped would be

OIL WEEKLY EDITION

BAASH ROSS News

BAASH-ROSS TOOL COMPANY • LOS ANGELES • HOUSTON • NEW YORK

A MONTHLY BULLETIN COVERING NEWS OF EQUIPMENT AND OPERATIONS IN THE PETROLEUM INDUSTRY

ON THE LOOKOUT

CASLESS SUNDAYS in Sweden have not discouraged one baker, who is now producing fuel for 50 of his trucks from the vapors arising from baking bread! Yeast acting on dough produces ethyl alcohol and other chemicals. When baked, the bread gives off this alcohol in steam which is trapped and distilled by special equipment said to be the first of its kind in the world. Produces 96% alcohol for about 33 cents a gallon. Details on process—when available—may disclose valuable tips to U. S. oil refiners.

BAASH-ROSS

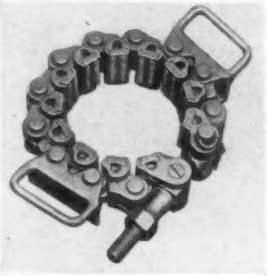
A SMALL CENTRIFUGAL PUMP OF GLASS for use with corrosive liquids or liquids which must be kept in uncontaminated form has been developed. It said to handle hot acids or brine-cooled liquids... has unique mechanical seal which replaces stuffing box... incorporates a safety device for preventing breakage of glass casing. (No. 91)

BAASH-ROSS

A SELF-ORIENTING DEFLECTING TOOL—run without use of orienting clamps or instruments—is designed to save valuable drilling time in a wide range of hole-straightening, sidetracking and directional drilling operations. Can be pointed to drill in any direction, and drills full hole which does not require reaming, the report states. In hole straightening, record of the angle of inclination is the only data required before running tool. (No. 92)

BAASH-ROSS

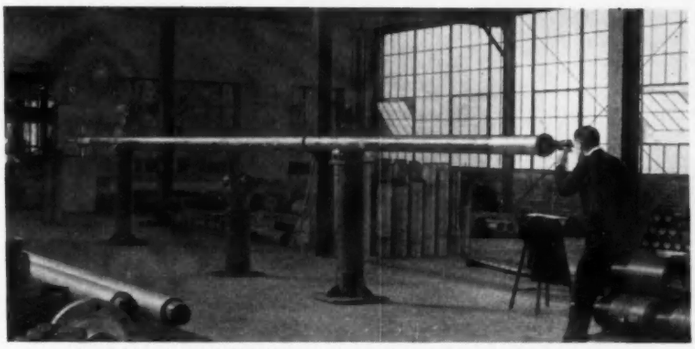
Your name, address and number of keyed items that interest you will bring further information.



WRAP THIS around your Drill Collars, Flush Joint Pipe, Casing, etc. to safeguard against a costly fishing job in case slips fail to hold ...or for an elevator shoulder on "collarless" fish, Pre-packed Gravel Liners, etc.

IT FITS anything from 3¾" up —*round or out-of-round*—and takes but a second to tighten in place. Each separate link is an *individual* gripping member, forming a bulldog hold that won't slip on even the smoothest surface.

IT'S THE BAASH-ROSS SAFETY CLAMP — one of the handiest tools you can put on your rig — for safety, for efficiency, for speeding up operations. Your nearest Baash-Ross representative will gladly show it to you. Or write us for details!



***EVERY** "Trubore" Drill Collar is checked with precision surveying instruments to insure accurate joint alignment and uniform wall thickness at all points!*

LOOK FOR THIS IMPORTANT THING IN DRILL COLLARS!

All-Around Balanced Design Is Hard To See ...But You Can Make Sure It's There!

Compared with most oil tools, a Drill Collar looks mighty simple. But don't be fooled by the appearance because, actually, a Drill Collar is one of the most painstaking of all oil tools to build *right*. Just take a second to check over the *many* different jobs that a Drill Collar must perform and you'll see what we mean.

For one thing, of course, it adds weight just above the bit. But that's only part of its job. It also acts as a "flywheel" for your entire drilling string, smoothing out sudden twists and strains as the bit bites into broken formations...and keeping the string "rolling" at an even uniform speed. At the same time, it must fight off the continuous abrasion of whirling against the raw, fresh-cut walls of the hole...and must be tough enough to resist the constant jars and impacts and torque surges of the roughest drilling operations.

That's why balanced *design is the important thing to look for in your drill collars... the* right *properties incorporated into the steel combined with the* right *methods of machining and finishing.*

Undoubtedly the best known drill collars in the oil industry are the famous Baash-Ross "Trubore" Drill Collars... famous because, through years of specialization in this field, Baash-Ross has learned how best to put *balanced* performance into every drill collar.

For example, the steel and heat treatment used have been painstakingly worked out... not necessarily to give the *hardest*—nor the *toughest*—nor the *strongest* drill collar... but rather, to produce a drill collar having *all* the required physical properties—toughness, hardness, strength, resistance to impact and fatigue, etc...in the best *balance* for long life and dependable operation.

That's an important point to remember. Because a drill collar that has too much of one property is apt to have too *little* of another... and under the bruising beating that a drill collar takes, just *one* weak point is enough to put it on the skids.

So *balanced* physical properties in the steel is one of the important factors you get in every "Trubore" Drill Collar. Then comes the workmanship.

Where ordinary drill collars often get into trouble is when the circulation hole is bored. This hole is bored from each end to meet in the middle. If the bores do not meet on the nose, a "dog-leg" something like this is left at the center. This is not only sufficient, in itself, to make the drill collar run unevenly, but the trouble gets worse with use. This "dog-leg" causes turbulence in the flow of the drilling fluid, setting up "eddy currents" that eat out and enlarge the hole at this point—throwing the collar—and with it, the drill string—into a bad state of the "jitters." Not only that, but did you ever try to get a retractable core barrel or survey instrument through a dog-legged drill collar? Try it!

YOU'LL NEVER find this trouble in Baash-Ross "Trubore" Collars. The circulation hole is held to tolerances so close that special boring equipment has been developed to meet them. And then the hole is *double-checked* by passing a ten foot test bar, not more than ⅛" smaller than the bore, through from end to end. It must pass freely at all points *without binding!*

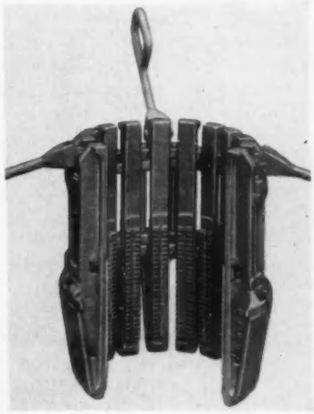
Add to this the fact that the joints are aligned so accurately that their projected axis with respect to the nominal axis of the product does not deviate more than ½" *in 40 feet*... and the straightness does not deviate more than ⅛" from true at any point *over the entire length*... and you have some idea of the *all around* balance that makes Baash-Ross "Trubores" the pick of the industry.

These things are hard to *see* in a drill collar, but there's an easy way to KNOW you are getting them—simply specify *Baash-Ross "Trubore" Drill Collars!*

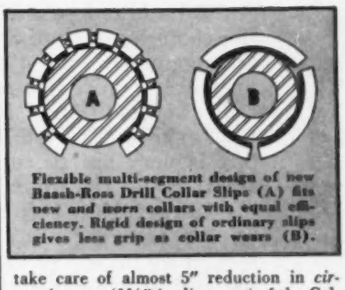
How to Hold a Drill Collar-*Safely!*

THE PROBLEM: Even the hardest-surfaced Drill Collar is bound to wear and lose diameter as it grinds constantly against the jagged fresh-cut walls of the hole. This change in diameter means that the ordinary rigid-type slips that fit when the Collar is new, no longer fit as the Collar wears. Result—less gripping contact, and constantly increasing danger of a costly fishing job from dropping the collar through the table.

WHAT TO DO: There's nothing in the field that can match *Baash-Ross Drill Collar Slips* for safety and efficiency in supporting Drill Collars. That's because these Slips, instead of being rigid, are *flexible—wrap* around the collar like a chain tong and fit *every inch* of the circumference, whether it's round, out-of-round... new or worn!



They adjust themselves—*automatically*—to a perfect fit around the pipe, always giving the same full grip regardless of the wear on the collar. In fact, these Slips will take care of almost 5" reduction in *circumference* (1½" in *diameter*) of the Collar. Your rig should have a set of these *now*. **They'll last for years, giving vital protection against costly fishing jobs every day they're in service!**



Flexible multi-segment design of new Baash-Ross Drill Collar Slips (A) fits new *and worn* collars with equal efficiency. Rigid design of ordinary slips gives less grip as collar wears (B).

A new Bulletin—13B—just printed gives all the details about Baash-Ross Drill Collar Slips. Send for it!

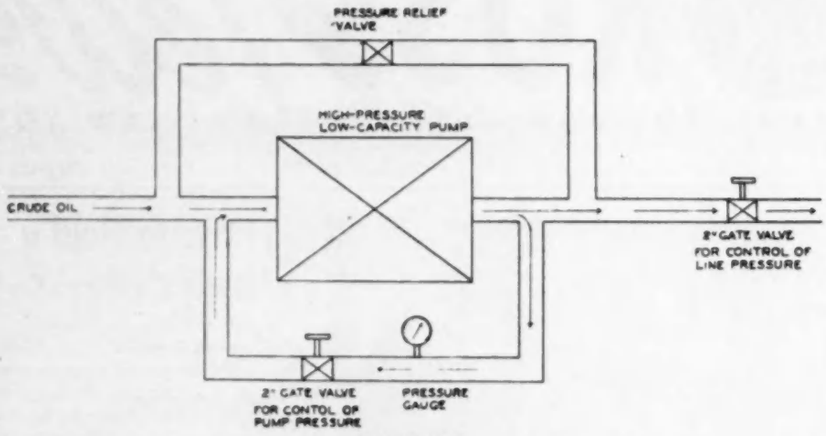

PRESSURE RELIEF VALVE
HIGH-PRESSURE LOW-CAPACITY PUMP
CRUDE OIL
2" GATE VALVE FOR CONTROL OF LINE PRESSURE
2" GATE VALVE FOR CONTOL OF PUMP PRESSURE
PRESSURE GAUGE

FIGURE 8
Detailed drawing of pump assembly

found, and the determinations again continued for the lower portions of the sand.

In Figure 7 is shown a detailed drawing of the well-head hookup. While the ½-inch pipe and 17-wire cable are simultaneously being lowered into the hole, everything above the lower 2-inch tee will be absent. The last joint of ½-inch pipe is cut and threaded to the exact calculated length for placing the top of the oil-water-indicating device at the bottom of the hole approximately opposite the sand face. The exact depth from the well head to the top of the indicating device must be accurately measured and allowance made for pipe stretch.

Upon completion of lowering operations the well head is assembled as shown in Figure 7. The upper end of the cable is strung through the reducer and tee arrangement. The tee is now filled with a fusible alloy having a low melting point (about 160° F.); contains eight parts of lead, four of tin, 15 of bismuth, and three of cadmium. It is suggested that this sealing method be used to pack off the cable in place of a stuffing-box arrangement, since the extreme pressure required to make a tight seal against the high-pressure fluid at the well-head by a stuffing-box is very apt to rupture the insulations on the individual strands inside the cable. After completion of the test the alloy can be removed by inverting the nose of the tee and heating it with hot water. The alloy will melt and drop to the ground leaving the cable in good condition and free to be removed by stringing it back through the tee.

It is also suggested that the ½-inch pipe be welded to a solid nipple arrangement made by threading one end of a length of 2⅜-inch round steel as shown in Figure 7. A 27/32-inch hole drilled off-center through the solid nipple will allow a length of ½-inch pipe to be inserted prior to welding. The nipple in turn is connected to a 2-inch high-pressure union. This not only provides a tight seal but also allows the ½-inch pipe to be hung off-center to prevent it from bearing against the cable strung along its outside surface. The length of ½-inch pipe, the solid nipple, and the upper flange of the union can be tightened to the last joint of the ½-inch string simultaneously. The union can then be lined up and bolted in place to complete the hookup.

After inserting the pressure gauge, metering arrangement, and gate valve, as indicated in Figure 6, the ½-inch pipe is connected to the lease water line.

All the connections that are to be included in the 2-inch oil line are not shown in Figure 6 in order that the diagram would not become too involved. After connecting a length of 2-inch pipe to the lower tee at the well head, as illustrated in Figure 7, the first thing inserted into the line is a 2-inch tee to bleed-off the water during the flushing-out operations at the start of the experiment. A 2-inch valve is connected between the tee and the flow meter (as shown in diagram) and another valve connected on the tee take-off (not shown in diagram). The pressure gauge and flow meter are next fitted into place. These instruments are used throughout the experiment merely as a check on the input rates as the data read on these gauges are not used in the determinations. Next is inserted another 2-inch valve. This should probably be a 2-inch needle valve since the pressure of the oil forced into the well will be controlled by manipulation of the oil flow through this valve. After this comes the high-pressure, low-capacity pump and a pressure gauge, and thence the source of crude oil which should be a steel tank of about 40-barrel capacity, to insure a sufficient crude-oil supply. There is also a by-pass arrangement (not shown) around the pump.

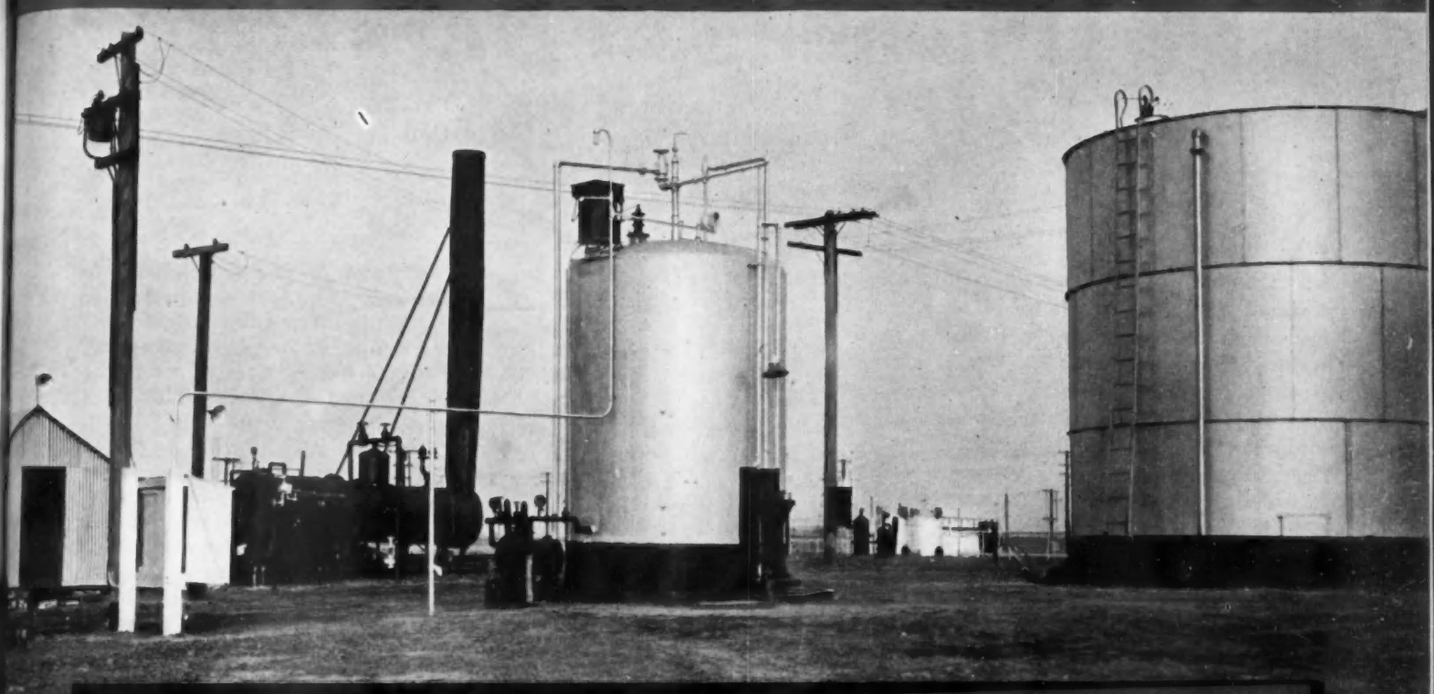
A detailed hookup of the pump is shown in Figure 8. A small-bore, triplex pump should be used. This type of pump is much more efficient at high pressures than a turbine, and the fluctuations in pressure produced by the triplex pump will be so "cushioned" by the time the oil reaches the bottom of the well that they will have a negligible effect upon the equilibrium of the oil-water-contact level.

At the beginning of the experiment, the triplex pump is started and the oil allowed to circulate freely through the lower by-pass arrangement illustrated in Figure 8. The 2-inch gate valve connected in this by-pass arrangement, is then slowly closed until the pump pressure is built up to the desired point. The valve which controls the pressure in the oil line will now be cracked to allow the high-pressure oil to pass into the well. As the pump pressure falls off, the valve in the by-pass arrangement is readjusted by closing it gradually to the point where the pressure again builds up to its initial stage. A spring-controlled relief valve should also be included in the hookup to safeguard the pump against excessive pressure.

This suggested method of measuring the water-input profile was developed with controlled selective plugging in view. It is believed that if this proposed test proves to be successful, it would be very possible to control the plugging medium and divert it into those highly permeable portions of the sand which are taking the majority of the water without in any way allowing this plugging agent to contaminate the "tighter" sections of the sand through which it is very desirable to continue water injection at a maximum rate in order to deplete the entire sand body in the shortest possible time.

A test of this nature would also provide a method of checking just what has taken place during plugging operations. This would be accomplished by making a determination of the input profile before and after plugging operations.

API Gravity Measured In Dollars



Shipping Gravity Raised: 1° API
Selling Price Increased: $.04 per barrel
TOTAL SAVINGS $750.00 Per Month

ON the R. E. Havenstrite, Operator, Larronde Lease at Dominguez, California, the production management noticed that shipping gravities were not consistent. Usually the production was shipped at 30° API . . . and occasionally at 31° API.

To an alert operator, a gain of four cents a barrel in selling price is worth investigating. Petreco engineers assisted in this instance, and recommended a solution of the problem.

With a Petreco Electromatic Dehydrator on the job, every tank has been shipped at 31° API. Cuts on the clean oil are consistently 0.2%, and the operator reports a monthly saving of $750.00.

Production and handling problems vary in every field. Petreco research technicians have made extensive studies of crude oil emulsions from practically every production area, and Petreco engineers are conveniently located in fields everywhere. Why not put your dehydration problems in the hands of oil treating specialists?

PETROLEUM RECTIFYING COMPANY OF CALIFORNIA

General Offices: **Los Angeles, California**

Gulf Coast Division: **Houston, Texas** ***Eastern Division:*** **Toledo, Ohio**

Representatives in Principal Oil Fields and Refining Centers

PETRECO

DEHYDRATING DESALTING

Throttle Control of Pumping Engines

By FLOYD SWINDELL

OBSERVATION of oil-well-pumping installations in the average field usually will result in the finding of an appreciable number of wells where the flow of power from the prime mover to the driven equipment is extremely erratic. This may be due to an improperly designed drive, to the fact that the well is not properly counterbalanced, to the poor condition of either the prime mover or the driven equipment, or both, or to the fact that the prime mover is not being operated properly.

Many users of multi-cylinder engines operate under a practice commonly known as "against the governor," wherein, as the well load changes, engine speed is controlled by the action of the governor. It does not seem to be generally known, particularly among the men who operate engines in the field, that when the flow of power is irregular under governor operation it usually can be made much smoother by the use of a set throttle. Many engines do not come equipped with an arrangement for dependably setting the throttle but in these cases a device can be installed easily and cheaply.

It has been established experimentally that the horsepower a multi-cylinder engine is delivering at various points in the pumping cycle can be closely determined by the use of a vacuum gauge and tachometer, based upon the principal that a linear relationship exists between manifold depression and torque. It is, therefore, possible to determine, within practical limits of error, the horsepower and torque being delivered at any desired point or points in the pumping cycle. In governor operation the governor is adjusted so that when the engine reaches the maximum speed necessary to obtain the desired number of pumping strokes per minute, the butterfly in the carburetor is closed or partially closed, thereby restricting the amount of fuel available and limiting the engine speed. As the well load increases and engine speed drops below governed speed, the butterfly is opened and the engine speed is increased as rapidly as the well load will permit. The rate of acceleration and the interval of time between the point at which engine speed starts to decrease and the butterfly opens are dependent also upon the sensitiveness of the governor. A study of polished-rod dynamometer cards will reveal that in many instances peak loads develop and diminish rapidly and that there may be several peaks in the cycle. Most of the governors that are available will not respond as rapidly as well load changes will occur, and the speeding up or slowing down of the engine may come after the need for it has passed. If the butterfly is thrown wide open immediately, and this is usually the case, the dynamometer card may show a peak due to the sudden and unnecessary introduction of additional power into the system.

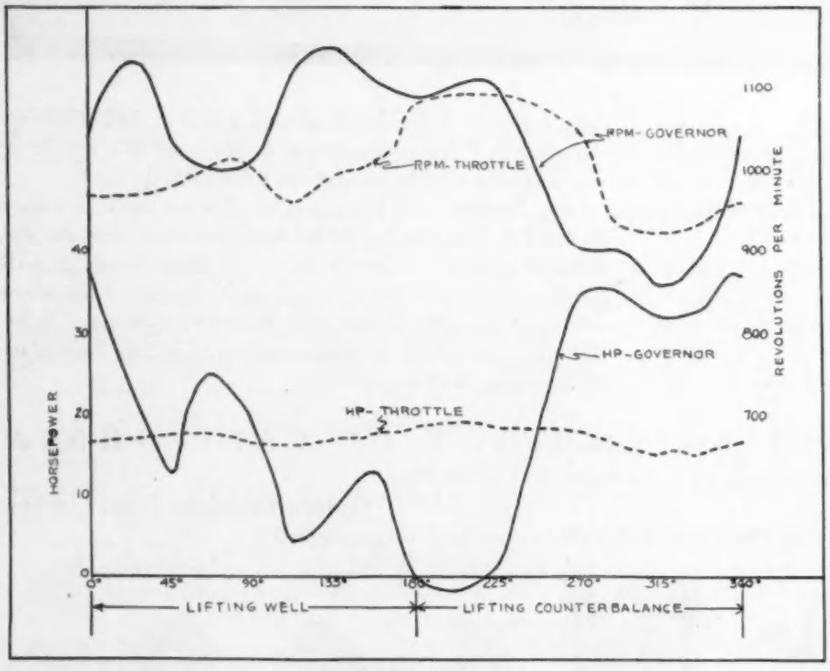


FIGURE 1

In throttle operation the governor is set at some point above the maximum speed that the engine will develop under normal operating conditions. Usually this should not be over 50 r.p.m., depending upon the sensitiveness of the governor. For example: If, by the use of a tachometer, it is determined that the maximum speed reached by the engine at the desired number of strokes per minute is 1000 r.p.m., then set the governor at 1050 r.p.m. With the well pumping under normal conditions the throttle is then set to permit only that amount of fuel which will enable the engine to run at 1000 r.p.m. Care should be taken that the well in fully pumped up when the throttle is adjusted. With this condition obtaining, if the sucker rods should part or any other of the equipment should break so that the load on the engine is materially

did you ever get a bargain in a cut-rate shop?

WICKWIRE ROPE

It's a funny thing about sub-standard merchandise . . . while it may seem a "bargain" at the time of purchase, invariably lesser service soon overshadows the often slight initial cost differential. A real bargain is a product that shows unusually low per-unit-of-use costs irrespective of purchase price.

That's why Wickwire Rope is a real bargain. While its purchase price is no higher than other recognized brands, cost records, made under every conceivable working condition, definitely point out Wickwire Rope as the outstanding long lived rope.

Here is how you can get a bargain . . . specify Wickwire the next time you order rope.

WICKWIRE SPENCER STEEL COMPANY

General Offices: 500 Fifth Avenue, New York City; Sales Offices and Warehouses: Worcester, New York, Chicago, Buffalo, San Francisco, Los Angeles, Tulsa, Chattanooga, Houston, Abilene, Texas, Seattle. Export Sales Department: New York City

THE GENUINE

CROSBY CLIP

THE SAFE FASTENING FOR OIL FIELD WIRE LINES!

- Riggers like CROSBY CLIPS because they are easy to put on.
- Owners like CROSBY CLIPS because they hold safely; protect men and equipment; prevent costly delays.

DEALERS WITH STOCKS IN ALL PRINCIPAL FIELDS

AMERICAN HOIST & DERRICK CO.

CHICAGO SAINT PAUL, MINN. NEW YORK

AMERICAN TERRY DERRICK CO., SOUTH KEARNY, N. J.

An A.A.P.G. Book (1941)

POSSIBLE FUTURE OIL PROVINCES *of the* UNITED STATES AND CANADA

A symposium conducted by the Research Committee of The American Association of Petroleum Geologists, A. I. Levorsen, chairman. Papers read at the Twenty-sixth Annual Meeting of the Association, at Houston, Texas, April 1, 1941, and reprinted from the Association Bulletin, August, 1941.

•

Edited by A. I. LEVORSEN

•

The purpose of this symposium is to get an over-all picture of the undiscovered oil resources of North America, north of the Rio Grande. Ten geological organizations have participated, to the end that this survey has behind it the authority of many geologists representing state and national geological surveys, large and small oil companies, and consulting and independent geologists. A map and a section of geology, stratigraphy, and structure illustrate each province description.

154 PAGES. 83 ILLUSTRATIONS
CLOTH-BOUND. PRICE, $1.50. POSTPAID
($1.00 to A.A.P.G. members and associate members)

AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS
Box 979, Tulsa, Okla., U. S. A.

reduced, its speed will increase until it reaches 1050 r.p.m., at which speed it operates against the governor until such time as the switch is turned off or the fuel supply becomes exhausted. Thus, the safety provision of the governor is available under throttle operation.

Figure 1 presents the results of a field study of governor-versus-throttle operation wherein the prime mover was a four-cylinder gas engine, the well was equipped with ¾-inch rods and a 2½-inch insert type pump set at approximately 4600 feet. All operating conditions, as nearly as could be observed, remained the same throughout the study except for the changing from governor to throttle operation. One test was made immediately after the other and all of the work was completed within a few hours. Governor operation is shown by solid lines and throttle operation by dashed lines. Under governor operation it will be noted that both the delivered horsepower and engine speed were erratic with a total range of 300 r.p.m. and 37½ horsepower through the cycle. This condition prevailed on both the upstroke and downstroke but the irregularity was greater during that part of the cycle when the engine was lifting the counterbalance. It is of particular interest to note that at the completion of the upstroke, the engine speeded up and the horsepower dropped below the zero line. In this segment of the curve the well was pulling the engine. Striking an average based on readings taken 22½ degrees apart the average delivered power was 18.35 horsepower.

Under throttle operation a very uniform power delivery was observed, the range being only from 15 to 18½ horsepower and the average was 16.98 horsepower. Under this practice there was a considerable amount of speed variation but at all points where speed was increasing the horsepower also was increased. The speed range was 195 r.p.m. compared to 300 r.p.m. under governor operation. No appreciable difference was shown in the average delivered power but there seems to be no question but what the more relatively smooth flow of power with the set throttle would be conducive to an extended physical life of all of the equipment involved and that the operation would be more economical.

SCIENCE —SKILL

An actual tracing of the earth's surface would produce an accurate and complete map.

Tobin Maps are based upon this principle—first, however, reducing the earth's surface to smaller scale, photographically and accurately, before making the tracing.

Tobin Maps are checked on the ground, are geodetically tied, and every Tobin Map is correlated with every other, irrespective of county lines, state lines, or adverse terrain.

Your investigation is invited without obligation.

EDGAR TOBIN AERIAL SURVEYS

San Antonio
Houston

PHOTOGRAPHIC MAPS
REGIONAL BASE MAPS
LAND OWNERSHIP MAPS
ABSTRACT SERVICES

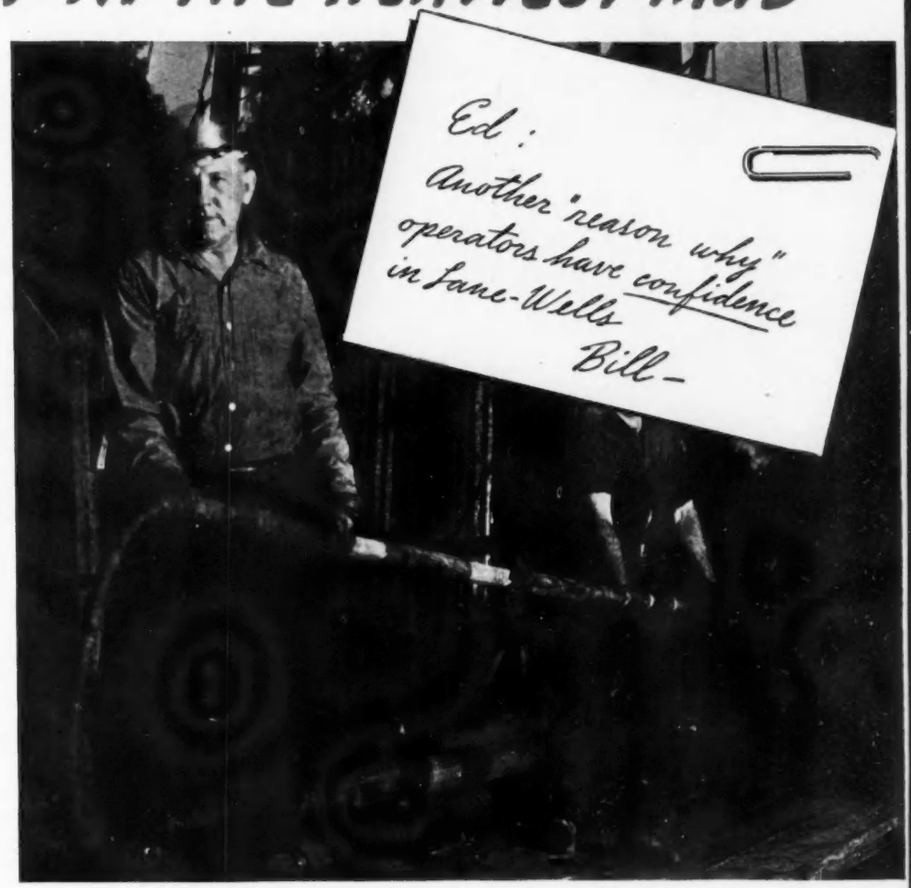
LANE-WELLS *Electrolog* GETS DOWN IN THE HEAVIEST MUD

When the going gets heavy you can rely on Lane-Wells Electrolog cable and electrode assembly to pull itself to bottom. The design and construction of Lane-Wells Electrolog cable provides more than enough weight to *get down*—even in the heaviest muds.

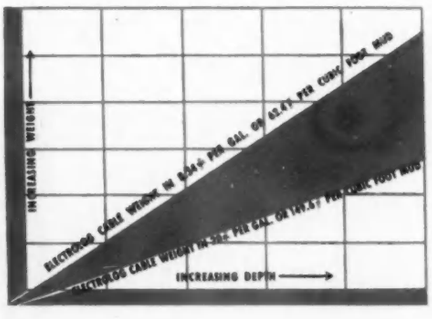
In addition, the relatively small variation in cable weights at any depth compared to the variation in mud weights is an important factor in Electrolog's maintenance of uniform depth measurements.

These are two important "reasons why" more and more operators call for Lane-Wells Electrolog to "get the job done right."

For your next Electrolog job—
"Call Lane-Wells."



Electrolog CABLE CHART SHOWS OPERATING CHARACTERISTICS



Lane-Wells Engineers will be glad to show you the complete, detailed chart of Electrolog weight, depth and mud weight curves.

Electrolog cable sinks in even the heaviest muds because it weighs more than the volume of mud it displaces. Even 20-lb. per gallon or 149.6-lb. per cubic foot mud is not heavy enough to float the steel armored cable that lowers the electrode into the hole.

LANE WELLS *Everywhere*

Practical Operating Hints for

1. EQUIPMENT CARE

Shield Over Sand Reel Protects Equipment From Spatter of Mud, Oil and Water

Metal shield over this sand reel cuts spatter of mud, water and oil over equipment.

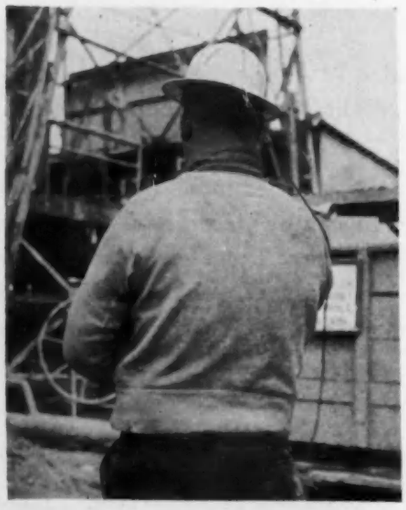
WORK and time is saved by one company in servicing and cleaning up mud pumps, tools and other equipment around drilling rigs by installing a sturdy, sheet-metal guard around the back portion of the sand reel in such a way that mud, water and oil does not spray from the line and spool to the pumping equipment.

Each end of the metal guard is strengthened and held in shape by welding to it a curved length of sucker-rod material. Welded bracing of the same material is anchored on each side to a single bolt on the bearing cap of the reel. A single bolt on the bottom supports the assembly.

By removing three nuts, the entire guard may be easily removed should it be necessary to open the reel for cleaning or respooling.

2. SAFETY

Derrickman's Hat Fastened to Belt



For safety of men on rig floor, helmet of derrick man is fastened to his belt.

IN THE interests of safety as well as saving time around the drilling rig, a California company requires that the derrick man have his safety hat attached to his body with a lanyard. Should his hat be blown off by the wind or knocked off during racking operations, it will not fall to the derrick floor where it might injure another workman, or blow on out of the derrick to fall in the mud pits. In either case, some time is lost in recovering the hat and climbing back up into the derrick.

A small hole drilled near the rear of the hat rim makes it possible to attach a clip and string leading from the hat down the worker's back to his belt, where it cannot interfere with his normal working operations.

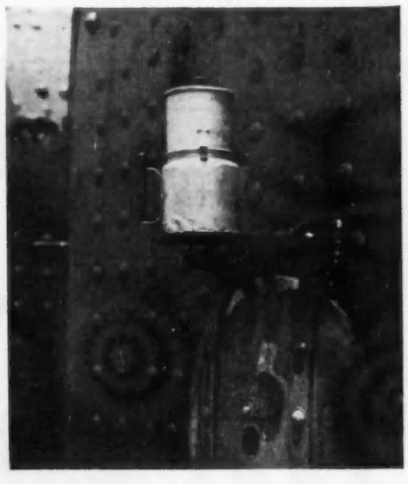
THE practical operating hints for the drilling rig and production man, appearing in these features each week, are secured from oil fields everywhere and offer suggestions that will help to improve field efficiency and safety. The items give an excellent picture of the remarkable ingenuity being exercised by the operating divisions of the industry. Contributions to these features will be paid for at the rate of $5 for each illustrated item accepted. Address contributions to "The Editor, THE OIL WEEKLY, Houston."

3. THE COFFEE POT

Pot Holder Sets on Boiler Projection

ON NEARLY every drilling rig, frequent cups of hot coffee constitute the principal relaxation for members of the crew, with the task of its preparation usually assigned to the pot fireman. One fireman made an inexpensive but practical holder for the coffee pot to assure that the drink always will be steaming hot.

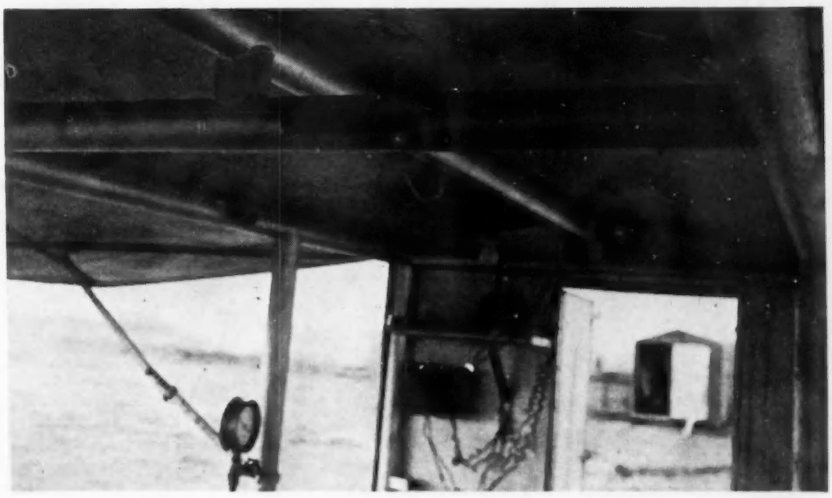
The pot holder is a plate made of a flat piece of steel, with the surface for supporting the pot



Coffee pot holder rests on hinge of fire-box door or in hand-hole plates.

roughly rounded with cutting torch and approximately eight inches in diameter, but left square on one edge. Two flat prongs four inches long and 1-inch wide are welded to the squared side and bent down at an acute angle to slip over any convenient horizontal rod or pipe. The device usually is hung over the hinge at the top of the boiler fire door, its prongs resting against the face of the door underneath to afford firm support. The horizontal portion extends out from the boiler and provides ample base for setting the pot in close proximity to the boiler, which provides ample heat to keep the drink heated as long as desired.

The pot holder is moved about whenever necessary, often being placed in the hand hole plates at the sides of the boilers when the wind changes direction and becomes too strong to leave the coffee pot exposed to the blow.



A section of drill pipe is incorporated into the roof frame of this pump shelter, affording a convenient hanger for a chain hoist for use when servicing the pumps.

4. GADGETS

Pipe Provides Hanger For a Chain Hoist

A STURDY roof truss, stiff enough to permit a member to be used as hanger for a chain hoist when servicing pumps set beneath the shelter, is formed by one drilling contractor from drill pipe. The long member supporting the center of the low crowned sheet metal roof is braced at the middle by a transverse member of the same material, carrying a short collar as spacer, both being securely welded together.

The longitudinal member also serves to carry the lighting circuit for the pump house, the wires being brought in at one end and taps taken off through holes burned through the lower part of the pipe at spots where drops are desired.

Clearance between the curved sheets forming the roof and the truss members permits looping a chain or short loop of sand line over the pipe as support for a hoist, enabling one man to service units with mechanical lift instead of requiring two or more when no auxiliaries are available.

Adjustable steel supports, made in three sections with two upright members and one horizontal connecting piece, eliminates need of blocking on uneven terrain.

5. RIGGING UP

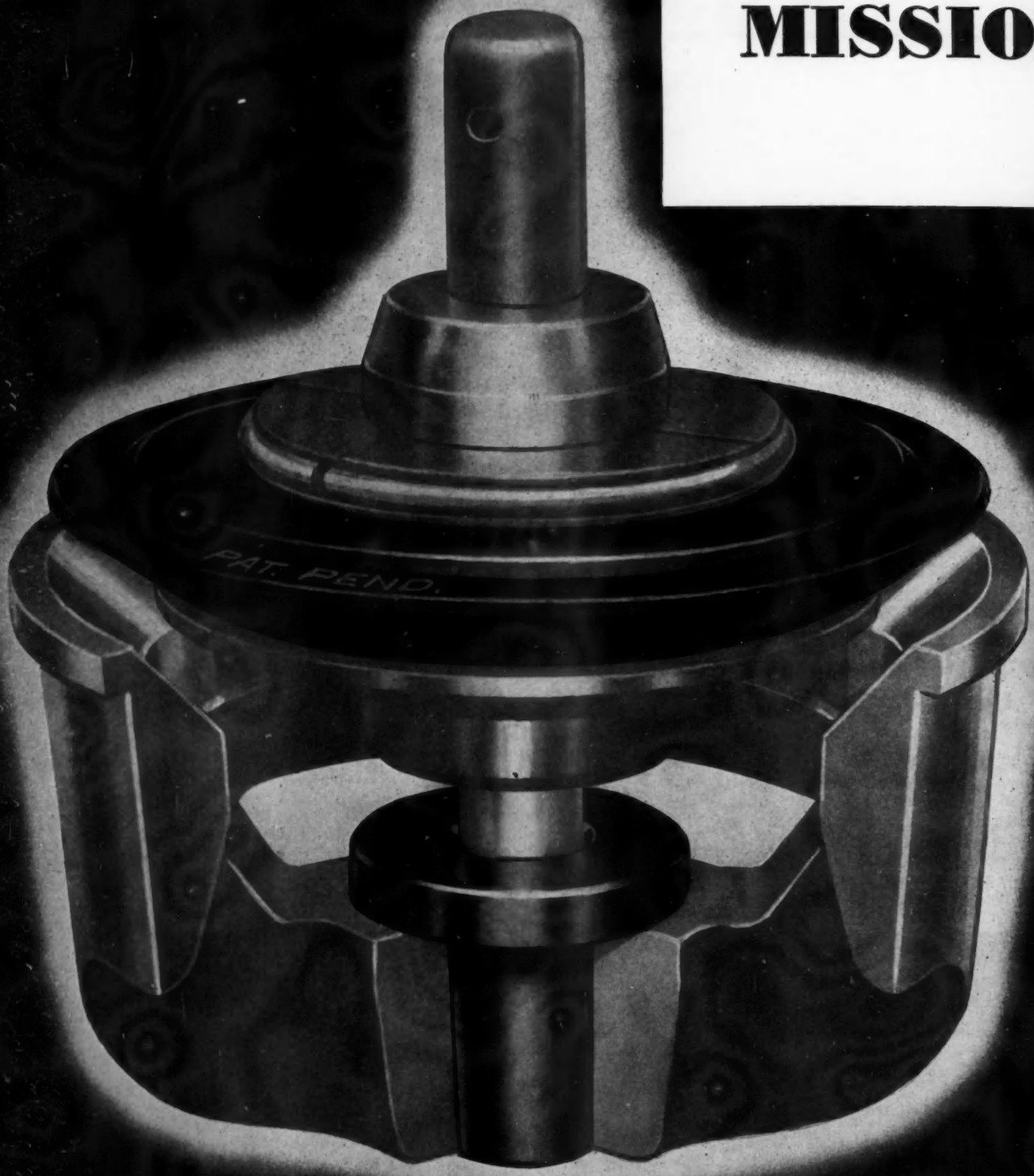
Adjustable Supports Under Engines

TO ELIMINATE the need for elaborate cribs of blocking under drilling engines on uneven terrain, Grace & Woods, in the KMA field, uses adjustable steel supports. The support is made up in advance of rigging up, and provides quick levelling of the engines and laying of adjacent walkway.

Each supporting pier is made in three sections; two supporting members and one cross member. The supports are made of pipe welded to a channel-iron base and braced with diagonal pieces of pipe welded to both the riser and the channel-iron base. The top or cross-member is made by using a convenient length of pipe to which are welded at right angles two drop legs that fit into the risers of the supporting piers. Holes are bored on 6-inch centers for dowel pins to make the height adjustment.

The walk beside the engines is supported with a smaller pipe slipped through the cross-member, and which may be as long as necessary.

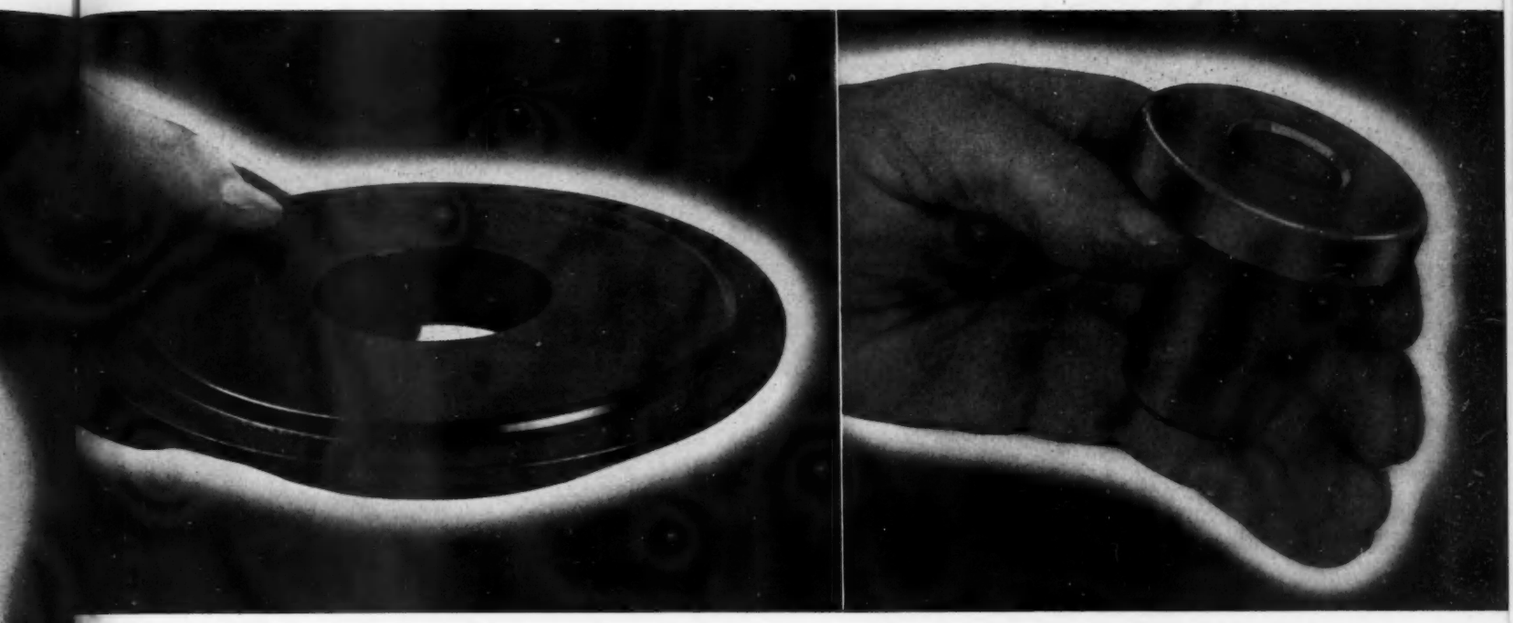
2 *Reasons Why*
MISSION S



THE TWO BIG REASONS why Mission Valves cost far less to use are: 1. New, Universal 308 Compound Valve Inserts; 2. Replaceable valve seat bushings.

Why ON SLUSH PUMP VALVES

Cost Far Less to Use



1. THE NEW MISSION COMPOUND-308 VALVE INSERTS LAST 3 TO 5 TIMES LONGER THAN REGULAR INSERTS IN ORDINARY MUD and up to 10 times longer than oil-resisting inserts in hot mud, treated mud, or oil and gas.

2. "PULL THE BUSHING AND SAVE THE SEAT." This inexpensive bushing takes the wear and is easily replaced at only a fraction of the cost of a new seat. Years of field tests have proved that these bushings greatly reduce valve seat replacement costs.

GUARANTEE

If a competitive test in your pumps does not prove that Mission Slush Pump Valves are far more economical to use than the valves you are now using, the entire purchase price of these valves will be promptly refunded.

SAVE MONEY!

Change Bushings when You Change Mission Compound-308 Inserts

When it becomes necessary to renew Compound-308 Inserts, it is advisable to change bushings at the *same time* . . . because Compound-308 Inserts give such remarkable service that they last as long as steel bushings.

TEST MISSION SLUSH PUMP VALVES in your pumps. We know the low operating cost of these valves will make you a confirmed Mission customer. **Mission Manufacturing Company, Houston, Texas. Export Office: 30 Rockefeller Plaza, New York.**

MISSION

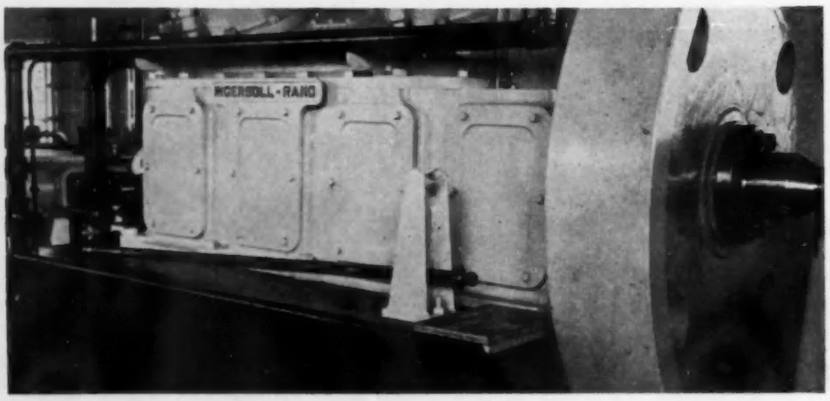
SLUSH PUMP PARTS

Your pumps stay running longer and cost less to repair when equipped with Mission Pump Parts

Practical Operating Hints for

1. ENGINE CARE

Possible Spark in Contact Between Starting Bar and Base Eliminated by Buffer Pad

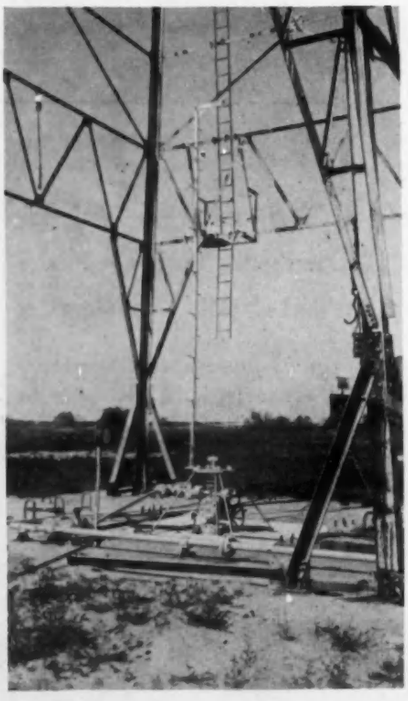


Buffer pad between starting bar and base eliminates spark, protects foundation.

PROTECTION for the corner of the engine foundation, and safeguard against a possible spark through contact between starting bar and the base, is afforded in one pump station by the use of buffer pads which are placed to catch the tip of the bar between strokes as the engine is barred over, and to intercept the bar as it is lowered to its normal storage position within the frame of the fulcrum casting.

The pad or buffer is a piece of 1-inch plywood, cut to extend from engine base to the edge of the foundation, and equipped with a short piece of molding to maintain the block in its proper position to receive impact as the bar is lowered.

Use of plywood in place of a single piece of board prevents splitting which would otherwise occur, and gives the block ample strength to stand up over a considerable period. Between starts, or to dress up the station for inspection, the block may be stored in a locker or placed in the guard around the flywheel pit.



Pole with overhanging arm supports hoist line for pressure-bomb lubricator.

2. BOTTOM-HOLE TESTS

Lubricator Positioned With Convenient Pole

INSTEAD of throwing a rope across the first or second girts in the derrick over which to sling the hoisting line for pressure-bomb lubricator, making it necessary each time for a man to climb into the derrick and fasten the lines in place, one company installs a single pole equipped with an overhanging arm to set up and remove the lubricator.

A length of 2½-inch tubing was equipped with ladder steps by welding short sections of sucker-rod material to it at the proper intervals. An overhanging short arm was welded to the top, in which four round holes were cut to allow for any slight adjustment that might be necessary to properly spot the lubricator hoisting block over the center of the tubing head.

The pipe ladder is welded to a small plate, which in turn is bolted to the tie-down flange on the top of the tubing head.

Savings effected by use of this pole more than offset the slight cost of assembling the material and welding it together. When the well is to be pulled, it takes but a few minutes to unbolt the base and remove the entire assembly from the derrick floor.

3. VALVE CARE

Guard Protects Field Valves from Trucks

THE DANGER of a service car or truck backing over partially buried valves on lead lines around the well location, resulting in a broken line or gate, has been eliminated to a great degree by the superintendent of one company.

Sucker-rod material is bent to the proper shape and welded, to

Sucker-rod material is used for this guard protecting field lead-line valve.

THE PRODUCTION MAN . . .

form a guard that is driven into the ground above the valve. Painted white, and maintained each time other pieces of equipment are painted on the well, the guard is easily seen by the driver of any vehicle on the location.

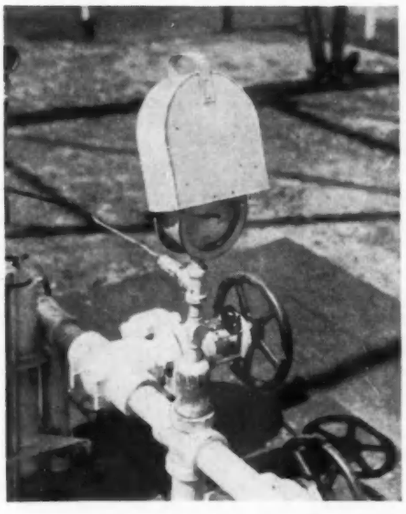
When the guard is driven into the ground over the valve just enough space is allowed over the handle to permit it to be opened or closed without moving the guard.

4. GAUGE CARE

Sand, Moisture Kept Out by Metal Cover

TO PROTECT Christmas tree pressure gauges from injury, a company operating in West Texas finds it advantageous to make up a galvanized iron cover that is slipped over the exposed gauge. Since the gauge normally is not read more than once or twice each tour, the slight amount of extra work involved in reading is negligible.

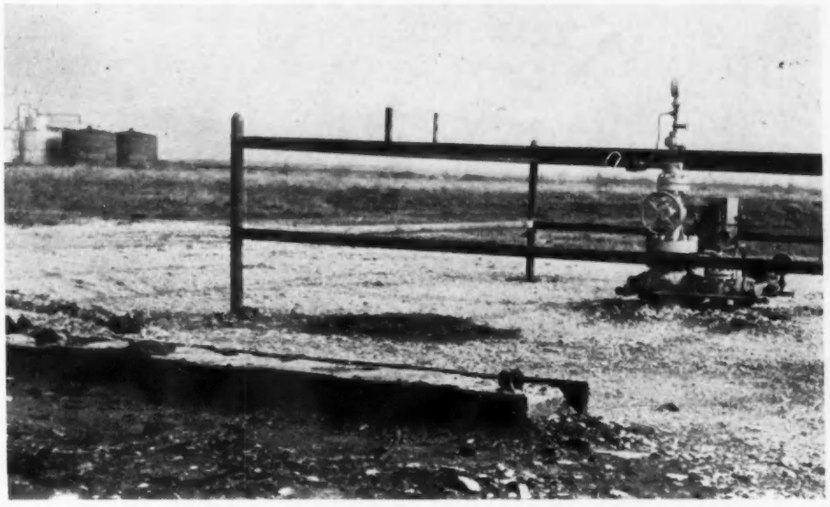
The hood protects the face of the gauge from detrimental effects of wind and sand storms and rain, resulting in a much longer accurate life of the pressure element. Whenever the well is pulled or worked on, the cover is left on the gauge as it is laid to one side, thus protecting the glass face from breakage.



Cover of galvanized iron protects this pressure gauge from sand and rain.

5. WELL SERVICING

Tie-Down for Portable Servicing Unit Uses Drilling Chain Set in Concrete Block



Drilling chain set in a concrete block forms anchorage for portable servicing unit.

ONE company sets short sections of heavy-duty drilling chain in the heavy concrete block serving alike as support and anchorage for the portable servicing unit.

The chain sections, embedded in the concrete, extend two or three links above the surface, but lie flat and present the least possible obstacle to work around the lease. For anchoring the machine, the usual tie-down is connected to the exposed chain sections, and the set-up rigidly anchored at the proper distance from the well to permit most effective servicing.

6. PIPING

Prefabricated Units Simplify Pipe Work

CONNECTION of well flow lines to field tanks has been so well standardized by one producing company in the West Columbia field that much of the pipe work is done before going to the tank farm or lease.

Manifolds for tying wells to the tank lines are made up by the welder, under shelter and in time not otherwise required for maintenance work. Parallel horizontal runs are equipped with risers, separable gasket-type unions, valves and cross-overs so that the unit as assembled may be taken to the tank battery and there tied in by making a minimum of field welds, and those straight butt-weld connections without angle or bevel to be computed and cut after arrival on the job.

Field and tank lines are laid long enough so they may be cut off with the torch to coincide with open ends of the unitized section, after which the unit is dropped in place and welded.

Manifolds for tying wells to tank lines are prefabricated by the shop welder.

A New
CRANE SERVICE
TO HELP YOU KEEP PIPE LINES AT PEAK EFFICIENCY
11 SIMPLE WAYS TO GET BETTER SERVICE FROM PIPING EQUIPMENT
PLEASE PASS ALONG
GOOD PIPING SERVICE BEGINS WITH GOOD INSTALLATION!
CRANE
For Defense
INSTALL PIPING RIGHT!
AN AID TO DEFENSE

Look to this new service to help you in two timely ways: (1) In getting better service from your piping equipment; (2) In training and supervising maintenance crews. Bulletin No. 2 is now ready with many hints on proper piping applications and good installation practice. Copies distributed to your own maintenance men may prevent trouble at a time when trouble is mighty costly. Ask your Crane Representative—or write us—for copies of Bulletin No. 2. They're free—while the supply lasts.

CRANE

CRANE CO., GENERAL OFFICES: 836 S. MICHIGAN AVE., CHICAGO

VALVES • FITTINGS • PIPE
PLUMBING • HEATING • PUMPS

NATION-WIDE SERVICE THROUGH BRANCHES AND WHOLESALERS IN ALL MARKETS

HIGHLIGHTS IN THE WEEK'S NEWS

Allowables

New Allowables to Balance Crude Supply With Demand

Continued balancing of crude oil production with market demand is forecast by the schedules of allowables for September. The results should be about the same as in August, when production generally coincided with the requirements of the refineries.

During September, as in August, Oklahoma may be expected to fail to produce as much crude as the markets would absorb, with the result that deficiencies will continue to come from storage. In the first half of August, storage of Oklahoma-origin crude was cut nearly a million barrels.

For September, Oklahoma's allowable is expected to be about 420,000 barrels daily, against approximately 490,000 barrels of demand, a 70,000-barrel deficiency, compared with one of 77,000 barrels for August.

Illinois also continues unable to produce all the oil that could be sold in a firm market, output for the past month having been about 26,000 barrels a day under the estimated available market for September.

California has been fixing allowables under estimated demand, but actual production has been approximately the same as demand, and a continuation is indicated for September.

Texas, Louisiana, Kansas, Arkansas, and New Mexico have adopted September allowables close to estimated demand, and actual production in those states may be expected to adhere to allowables; although Kansas in recent months has been expanding pipe line capacity and taking advantage of demand that Illinois no longer can meet, in which circumstances the state's allowables have been placed each month a little above indicated demand as calculated by the Bureau of Mines.

Louisiana's September allowable of 328,646 barrels daily embraces a quota of 258,373 barrels for South Louisiana fields and 70,273 for those in North Louisiana.

The Kansas allowable of 248,800 barrels daily for September is 6000 barrels over the August figure and 9000 above the Bureau of Mines estimate of market demand for Kansas crude. The state's pipe line capacity is estimated at 247,000 barrels daily, and several unconnected pools in Western Kansas have market outlets through trucking to refineries or to railroad loading racks.

News Index

General:
- Allowables 51
- Washington 10

Markets-Statistics 53

Men in News 75

World-Wide Developments .. 59

Crude Oil Prices 56

U. S. Field Operations:
- Arkansas 65
- California 66
- Completions 67
- East Texas 62
- Illinois 61
- Kansas 61
- Louisiana Coast 65
- Michigan 66
- Mississippi 66
- Nebraska 62
- North Louisiana 65
- North Texas 62
- Oklahoma 61
- Rocky Mountains 66
- Southwest Texas 65
- Texas Gulf Coast 65
- West Texas 62
- Wildcat Development 73

September Allowables Foreshadow Close Balancing of Crude Oil Production With Demand

(Barrels Daily)

STATE	Bureau of Mines Estimate of Demand For August	Bureau of Mines Estimate of Demand for September	State Allowable Beginning of September	Difference of September Allowable From Demand	Percent Difference of September Allowable From Demand
Arkansas	80,700	79,000	76,013	— 2,987	— 3.8
California	641,000	634,700	610,000[1]	— 24,700	— 3.1
Kansas	240,800	239,800	248,800	+ 9,000	+ 3.7
Louisiana	324,500	324,000	328,646	+ 4,646	+ 1.4
Michigan	36,000	39,500	42,000[2]	+ 2,500	+ 6.3
New Mexico	112,900	113,200	113,200	.....	.....
Oklahoma	492,400	489,800	420,000[3]	— 69,800	—14.2
Texas	1,361,600	1,378,600	1,357,000[4]	— 21,600	— 1.5
Total 8 Prorated States	3,289,900	3,298,600	3,195,659	—102,941	— 3.1
Illinois	390,100	392,500	366,400[5]	— 26,100	— 6.6
Other States	260,000	268,900	.....	.....	.....
Total United States	3,940,000	3,960,000	.....	.....	.....

[1] Recommendation of Conservation Committe of California Oil Producers.
[2] Estimate of actual production that will occur under prescribed regulations.
[3] Amount expected to be recommended at Corporation Commission hearing September 5.
[4] Calculated daily average of actual production at beginning of month, allowing for usual under production of 3½ percent below net allowable, which was figured at 1,406,362 barrels daily. However, allowable normally increases as new wells are completed, and actual daily average production for month is expected to conform with Bureau of Mines estimate of demand. Under September order, most Texas fields were ordered shut down September 1, 6, 7, 13, 14, 20, 21, 27, 28 and 30. Panhandle was ordered shut down September 7, 14, 21 and 28.
[5] Average level at which unprorated Illinois produced during 4 weeks ended August 23.

Demand

June Production Jumps 60,000 Barrels Over May

Jumping 60,000 barrels a day over the May average, domestic crude production in June reached a daily total of 3,834,200 barrels, which still was under the record-breaking months of March and April, 1940, it was reported August 26 by the United States Bureau of Mines.

All of the important producing states increased their output in June, with Kansas making the largest relative gain and Texas the smallest, the bureau stated. The upward trend in Illinois was resumed, and even Michigan, which had been slumping rapidly, made a gain.

Total output for the month was 115,027,000 barrels, compared with 116,976,000 barrels in May and 111,690,000 barrels in June, 1940, the bureau announced. For the first half of the year, production was off slightly more than 20,000,000 barrels—667,338,000 barrels against 687,901,000 barrels in 1940.

"Although crude runs to stills moved up to a new peak of 3,865,000 barrels in June, the gain in production and imports was considerably larger, with the result that about 3,500,000 barrels of crude was withdrawn from storage, compared with about 4,500,000 barrels in May," the report commented. "Stocks of refinable crude on June 30 (259,075,000 barrels) were nearly 3,000,000 barrels below the level of a year ago."

Residual Fuel Oil Up

The principal changes in refinery yields in June were an increase of 0.3 per cent in gasoline, a decrease of like percentage in distillate fuel oil and a gain of 0.6 per cent in residual fuel oil. The changes for gasoline and distillate were expected, but the gain in the residual yield was abnormal.

"The domestic demand for motor fuel in June was 58,413,000 barrels, or only 5 percent above a year ago," the bureau continued. "This comparatively poor showing for June, 1941, resulted from a number of factors, chief of which were pre-tax buying in June, 1940, and speculative buying over the first four or five months of 1941. Voluntary civilian curtailment may also have been a factor.

"Exports of motor fuel, exclusive of the 'shuttle' movement, amounted to 1,262,000 barrels, or only about half the total of a year ago. Stocks of finished and unfinished gasoline declined about 3,100,000 barrels in June. This was less than half of withdrawals in June, 1940, but stocks on June 30 (89,842,000 barrels) were about 4,000,000 barrels below last year's level. Motor fuel stocks on the East Coast were about the same as a year ago, but it should be noted that developments in July and August have considerably reduced the number of days' supply in that area.

"Relatively large gains in the domestic demand for other products over June, 1940, were recorded, kerosene being about the only notable exception. The demand for aviation gasoline is run-

You won't have to face a long, costly shut-down if you have a supply of Eagle Lead Wool handy. When you hit bottom water, this soft, flexible metallic wool saves the day—becomes a solid, secure plug under tamping pressure. Fits the hole — fills every corner—seals every crevice. The plug is permanent, too, because Eagle Lead Wool is non-corrosive. Rapidly installed with Eagle Wire Containers—shaped like cartridge to carry wool to cavity in one mass. Sizes to fit all casings.

Get set for bottom water—order today through your jobber.

These 3 Eagle Bearing Metals meet most requirements..

•

Eagle Dreadnaught — for extreme speed and pressure conditions

•

Eagle Outlasta — for medium speed and pressure conditions

•

Eagle Durable — for low speed and pressure conditions

EAGLE LEAD WOOL

Seals off bottom water PRONTO!

EAGLE EP PICHER

THE EAGLE-PICHER LEAD COMPANY
CINCINNATI, OHIO

★ ★ ★ ★ ★ ★ ★ ★

The **BELLEVUE**

One of the few famous Hotels in AMERICA

... became famous through its unsurpassed facilities, its superb food, the unvarying graciousness of its service and its vigilant management. And you will also appreciate its reasonable rates.

★ BELLEVUE STRATFORD IN PHILADELPHIA

CLAUDE H. BENNETT, *General Manager*

AIR-CONDITIONED RESTAURANTS

ning about 40 percent ahead of last year, but stocks are also nearly that much higher."

The report showed that June production of aviation gasoline was 1,531,000 barrels against 1,573,000 barrels in May; transfers to regular gasoline were 307,000 against 264,000 barrels, and exports were 386,000 against 373,000 barrels. Domestic demand for the month was 1,133,000 against 647,000 barrels, and stocks declined from 7,636,000 to 7,341,000 barrels.

Of interest in connection with the bureau's review of June conditions were figures compiled by the Department of Commerce on oil exports and imports for the first half of the year.

Exports of crude petroleum for the period were 15,793,000 barrels valued at $21,658,000, against 26,311,000 barrels valued at $34,902,000 in the first six months of 1940. Shipments of gas and fuel oil were 10,845,000 barrels valued at $11,857,000, against 16,926,000 barrels valued at $20,189,000; motor fuel and gasoline shipments, including anti-knock compounds, were 7,334,000 barrels valued at $24,029,000, against 10,683,000 barrels valued at $39,069,000, and lubricating oil exports were 4,455,000 barrels valued at $37,166,000 against 6,664,000 barrels valued at $60,200,000.

Imports of crude petroleum for the period were 22,717,000 barrels valued at $17,654,000, against 18,349,000 barrels valued at $13,488,000, and receipts of gas oil and fuel oil were $12,739,000 against $13,703,000.

Bureau of Labor Statistics figures placed the price index for petroleum products in June at 59.9, compared with 55.3 in May and 50 in June, 1940. The crude oil capacity represented by the bureau report was 4,392,000 barrels, giving an operating ratio of 88 percent, the same as in May, compared with 84 percent in June of last year.

Ratner Urges Priorities for Kansas Oil Line Pipe

Governor Payne Ratner of Kansas has urged officials of Socony-Vacuum Oil Company and Kaw Pipe Line Company to "do all in their power" to gain priorities on steel for proposed new Kansas pipe lines.

Although daily crude oil runs established a record peak last week, at 254,500 barrels, further increases in production are limited by lack of pipe-line facilities, Ratner said.

Two lines in Barton and Rice Counties planned by the companies are expected to boost line capacity by 45,000 barrels daily, and eliminate a transportation bottleneck. Sixty miles of pipe are involved.

Pipe Ordered for Another Line Out of Cement

Anderson - Prichard Oil Corporation has ordered pipe for a line from Cement field, Caddo County, Oklahoma, to Cyril terminal where oil will be moved into the Magnolia Pipe Line Company's unused line to Southern Oklahoma.

Runs will average 5000 barrels daily. Immediate reconditioning of Magnolia's line will be completed before end of August.

Rock Island Refining Company also contemplates construction of an outlet from Cement to move an additional 3000 barrels via other pipe line systems to its refinery at Indianapolis, Indiana.

Tanker Shortage Brings Cut In Heavy Fuel Oil Movement

Through the continued storming in the East over the prospect of shortages of gasoline and fuel oils, the industry during the week ended August 23 calmly went about its task of keeping that area supplied to the utmost of its ability and facilities; and the results were surprisingly satisfactory. In a week when there was supposed to be a pronounced reflection of the transportation shortage, according to some forecasts, there were not actually any exceptionally disturbing developments in the statistical situation.

The most unfavorable development in the East Coast was a 1,308,000-barrel withdrawal of industrial grade fuel oil from storage, in contrast with a half-million barrel addition in the corresponding week last year. This emphasized the fact that some comsumers of the heavy fuels including utility companies and some industrial plants, might be forced rapidly to switch from oil to coal for fuel.

The large draft on heavy fuel oil stocks was favorable, however, from the standpoint that it reflected the industry's concentration of shipping facilities primarily upon the most urgent problems of keeping the East supplied with gasoline and heating oils, the stocks of those two products having been maintained as well as in the corresponding week last year.

Meanwhile, there was success in keeping East Coast refineries well supplied with crude, as the plants of the district operated at 91.4 percent of their rated capacity, compared with 87.1 percent the previous week, runs to stills having been increased to 615,000 barrels daily from 586,000. During the previous week, August 9 to August 16, stocks of crude oil in the East Coast had been increased 452,000 barrels.

Between August 16 and August 23, the East Coast inventory of residual fuel oil was reduced from 10,090,000 to 8,791,000 barrels, and the latter quantity was nearly 3,000,000 barrels under the 11,590,000 barrels on hand at the corresponding time last year, whereas potential demand is larger now than then. Along with recent withdrawals of the heavy fuel oils from storage on the Atlantic seaboard, there has been some backing up of supplies on the Texas-Louisiana Gulf Coast, attesting the failure of those oils to move coastwise in normal volume. In Coastal Texas the stocks increased 405,000 barrels during the August 23 week, that is, from 7,837,000 to 8,242,000 barrels, and they then were about 800,000 barrels higher than a year previously. Except on the East Coast, residual fuel oil stocks* everywhere appear satisfactory, being in most districts not greatly different from a year ago, not counting a large but desirable reduction in California inventories.

Stocks of gasoline on the East Coast were drawn upon to the extent of 699,000 barrels in the week ended August 23, compared with a reduction of 475,000 barrels in the corresponding week last year. At the close of the week they were about 1,300,000 barrels smaller than one year previously, having totaled 20,094,000 barrels, compared with 21,373,000. So far in the third quarter, that is, from July 1 to August 23, the draft on East Coast gasoline stocks has been about 1,000,000 barrels larger than in the corresponding period last year. Lagging of shipments to the area has been attested by somewhat subnormal movement out of the Gulf Coast lately, although stocks in the latter district are now practically the same as a year ago. The fact that United States stocks of gasoline are 3,000,000 barrels smaller than at this time last year is accounted for largely by the million barrel reduction on the East Coast and a 2,000,000-barrel decline in California.

East Coast Heating Oils

Much interest naturally centers now on East Coast inventories of heating oils, as cooler weather approaches, and some satisfaction is afforded by the current building up of the stocks. There was an addition of 458,000 barrels of gas oil and distillate to East Coast storage in the week ended August 23, compared with a 515,000-barrel accumulation in the like week last year. Moreover, between June 28 and August 23, an 8-week period constituting almost two thirds of the third quarter of the year, the East Coast stocks were increased 5,475,000 barrels, compared with 5,566,000 barrels in the corresponding period last year. The present inventory of 14,896,000 barrels is approximately 1,000,000 barrels smaller than that held a year ago. In the Middle West, another important consuming area, stocks are about one half million barrels smaller than at this time last year. California's inventory is over 2,000,000 barrels larger than then. For the country as a whole, the stocks are up about 300,000 barrels, at 44,282,000.

Crude oil production in the United States was close to the all-time peak in averaging 3,975,450 barrels daily in the week ended August 23, and it was 13.3 percent larger than in the corresponding week last year. Runs to stills were exactly the same as production, and the coincidence was doubly rare in that the runs were 13.3 percent larger than the daily average of August last year, just as production was up that amount over a year previously.

For the country as a whole, refineries operated at 92.6 percent of rated capacity, against 91.3 percent the week before. The refining capacity was utilized to the extent of 91.4 percent on the East Coast, 92.8 percent in the Appalachian region, 98.4 percent in Indiana-

Trends of Operations and Changes in Stocks

Figures are from American Petroleum Institute weekly reports, except those on crude stocks, which are from Bureau of Mines weekly reports

WEEK ENDED	Crude Oil Production (Barrels Daily)	Crude Runs to Stills (Barrels Daily)	Crude Oil Stocks (Barrels)	Gasoline Stocks (Barrels)	FUEL OIL STOCKS	
					Gas Oil & Dist. Fuels	Residual Fuel Oil
1939:						
April 22	3,526,700	3,280,000	277,156,000	[8]87,769,000	21,085,000	105,035,000
April 29	3,568,200	3,405,000	278,440,000	86,794,000	[7]25,844,000	[7]108,409,000
May 6	3,580,900	3,275,000	[2]278,607,000	86,216,000	26,167,000	108,597,000
August 5	[2]3,909,400	3,445,000	268,982,000	76,431,000	35,601,000	114,512,000
August 26	[1]1,690,800	3,475,000	246,982,000	73,475,000	37,722,000	116,237,000
October 7	3,435,850	3,505,000	231,564,000	[8]71,152,000	38,549,000	114,397,000
October 21	3,771,550	[2]3,650,000	[3]229,127,000	72,122,000	39,358,000	115,060,000
1940:						
January 27	3,611,600	3,470,000	237,339,000	87,914,000	27,407,000	103,015,000
February 24	3,732,100	3,490,000	240,836,000	96,719,000	25,390,000	103,419,000
March 30	3,841,250	3,585,000	250,561,000	101,370,000	23,778,000	105,081,000
April 20	3,858,550	3,535,000	254,881,000	[1]102,817,000	24,779,000	103,323,000
April 27	3,845,250	3,555,000	256,670,000	102,452,000	24,997,000	102,552,000
May 25	3,835,650	3,580,000	259,330,000	100,297,000	28,356,000	104,015,000
June 22	3,846,450	[2]3,690,000	260,891,000	97,276,000	32,751,000	104,683,000
June 29	3,639,550	3,625,000	262,059,000	95,142,000	33,590,000	104,486,000
July 27	3,690,400	3,555,000	262,579,000	90,173,000	38,981,000	105,924,000
August 31	3,501,350	3,575,000	265,865,000	85,393,000	44,766,000	108,774,000
September 28	3,799,950	3,600,000	263,609,000	82,273,000	47,986,000	108,450,000
October 26	3,640,300	3,565,000	262,746,000	80,891,000	[1]48,893,000	108,475,000
November 9	3,584,200	3,510,000	261,631,000	[6]79,847,000	48,408,000	107,687,000
November 30	3,335,050	3,510,000	262,679,000	80,284,000	46,212,000	106,618,000
December 28	3,385,500	3,585,000	261,552,000	83,274,000	42,266,000	102,620,000
1941:						
January 25	3,599,100	3,625,000	260,093,000	88,762,000	39,039,000	100,297,000
February 22	3,629,650	3,590,000	261,783,000	95,812,000	34,381,000	98,631,000
March 1	3,632,250	3,585,000	263,176,000	96,917,000	33,725,000	97,510,000
March 29	3,746,550	3,625,000	266,187,000	[2]99,727,000	29,949,000	96,152,000
April 26	3,726,850	3,675,000	266,149,000	96,647,000	29,543,000	94,732,000
May 31	3,786,100	3,699,000	262,356,000	93,845,000	33,524,000	92,757,000
June 7	3,816,700	3,880,000	260,956,000	92,522,000	34,305,000	93,384,000
June 14	3,822,750	3,755,000	260,464,000	92,478,000	35,060,000	93,182,000
June 21	3,857,600	3,845,000	259,142,000	91,916,000	35,736,000	93,281,000
June 28	3,847,250	3,930,000	259,399,000	91,461,000	35,732,000	92,896,000
July 12	3,870,750	[4]4,090,000	255,567,000	89,561,000	37,812,000	92,699,000
August 2	3,695,250	3,845,000	252,535,000	86,779,000	41,433,000	94,800,000
August 9	3,911,950	3,835,000	251,945,000	86,022,000	42,136,000	95,412,000
August 16	3,953,300	3,920,000	251,013,000	83,777,000	43,558,000	94,752,000
August 23, 1941	[1]3,975,450	3,975,000	.....	82,566,000	44,282,000	94,308,000
August 23, 1940	3,508,000	[5]3,508,000	[4]263,425,000	85,258,000	43,407,000	106,933,000
Change in past year	+13.3%	+13.3%	—4.7%	—3.1%	+2.0%	—11.8%

[1] All time peak. [2] Peak for year. [3] Lowest since April, 1922. [4] Stocks, August 17, 1940.
[5] Lowest since October, 1922, due to shut down of six Mid-Continent states. [6] Lowest for year.
[7] Prior to April 29, 1939, data did not include stocks at terminals, in transit, etc., except in California.
[8] August, 1940, daily average.

Wholesale Prices of Refined Products in Principal Markets

	Range Last Week (Cents a gal.)		Changes from Week Before	
REFINED GASOLINE				
Oklahoma Refineries:				
60 Octane and Under	5¼	5⅝	...	...
63-66 Octane	5⅝	6	...	...
72-74 Octane	6	6⅜	...	...
80-82 Octane, Ethyl	6⅛	7¼	...	...
Mid-Western Tank Car:				
60 Octane and Under	5⅛	5⅝	...	...
63-66 Octane	5⅝	6	...	...
72-74 Octane	6	6⅜	...	...
80-82 Octane, Ethyl	7⅛	7⅜	...	...
New York Harbor:				
68-70 Octane	8	8	...	...
72-74 Octane	8	8½	...	...
Min. 80 Octane, '39 Research	8½	9	...	...
Gulf Coast:				
60 Octane unleaded	5½	5⅝	+⅜	...
65 Octane unleaded	5¾	5⅞	+⅛	...
68 Octane unleaded	6	6½	...	+½
70 Octane unleaded	6	6⅝	...	+⅜
72-74 Octane leaded	6	6¼	...	+⅛
Min. 80 octane, '39 Research	6¼	6½	...	+⅛
NATURAL GASOLINE				
Grade 26-70:				
F.O.B. Group 3	4½	4½	+¼	+¼
F.O.B. Br'kenr'ge, Tex.	3¾	3¾	+¼	+¼
KEROSENE				
Oklahoma Refineries:				
41-43 water white	4⅝	4⅝	...	...
42-44 water white	4½	4⅞	...	...
Mid-Western Tank Car:				
41-43 water white	4⅝	4⅝	...	...
42-44 water white	4½	4⅞	...	...
New York Harbor	5¾	5¾	...	...
RANGE OIL				
At Oklahoma Refineries	4	4⅜	...	...
In Mid-Western Market Group 3, basis	4	4¼	...	...
LIGHT FUEL OILS				
Oklahoma Refineries:				
No. 1 straw	3½	4¼	...	...
No. 3	3⅜	3⅝	...	...
Mid-Western Tank Car:				
No. 1 white	3¾	4⅛	...	...
No. 3	3¼	3½	...	...
New York Harbor:				
No. 1	5¾	5¾	...	...
No. 3	5¼	5¼	...	—¼

	Range Last Week (Per Bbl.)		Changes from Week Before	
HEAVY FUELS				
Oklahoma Refineries:				
No. 6	$0.80	$0.85	...	...
Mid-Western Tank Car:				
No. 5	.85	.85	...	...
No. 6	.85	.87½	...	...
New York Harbor:				
No. 5	1.65	1.75	...	...
No. 6	1.35	1.50	...	...
BUNKER C FUEL OIL (Per barrel, ships' bunkers)				
Gulf Coast	$0.85	$ .95	...	...
New York Harbor	1.35	1.50	...	...
DIESEL OIL (Per barrel, ships' bunkers)				
Gulf Coast	$1.55	$1.55	...	...
New York Harbor	2.15	2.15	...	...
Los Angeles Basin 27 gravity	1.05	1.15	...	...
LUBRICATING OIL (Cents a gal.)				
Oklahoma Refineries:				
Bright Stock, 150-160 viscosity at 210° 10-25 pour test	20½	21½	...	...
Neutral oil pale No. 3 Color, 150 viscosity at 100°, 0-10 pour test	12½	13½	...	+¾
Western Pennsylvania:				
Bright Stock, 145-155 viscosity at 210°, 25 pour test	25	28	...	...
Neutral Oil No. 3 Color, 150 viscosity at 70°, 25 pour test	31	35	...	...

Illinois-Kentucky, 91.6 percent in Oklahoma-Kansas-Missouri, 84.9 percent in Inland Texas, 98.5 percent on the Texas Gulf Coast, 106.4 percent on the Louisiana Gulf Coast, 117.0 percent in North Louisiana and Arkansas, 73.5 percent in the Rocky Mountain states, and 79.9 percent in California.

Pennsylvania Crude Cut Is Protested; Markets Strong

The clamor over government-forced reduction of Pennsylvania crude-oil prices largely drowned out other market developments the past week, such as further improvement of natural-gasoline prices, raising of quotations on gasoline on the Gulf Coast, and marking up of neutral oils at Oklahoma refineries.

Producers of Pennsylvania-grade crude loudly protested the action of the Office of Price Administration and Civilian Supply in placing upon that crude ceilings that forced purchasers to cut postings back 23 to 25 cents a barrel, wiping out the advances of those amounts as of August 14. The reductions to conform with the ceilings were made August 25.

The producers called upon their governors and congressmen to protest to the price administrator against the ceilings and through association asked for immediate hearings on the price order.

It was pointed out that the production of Pennsylvania-grade crude was the only production in the large consuming Eastern district, and the con-

Crude Oil Production Nearly 4,000,000 Barrels Daily

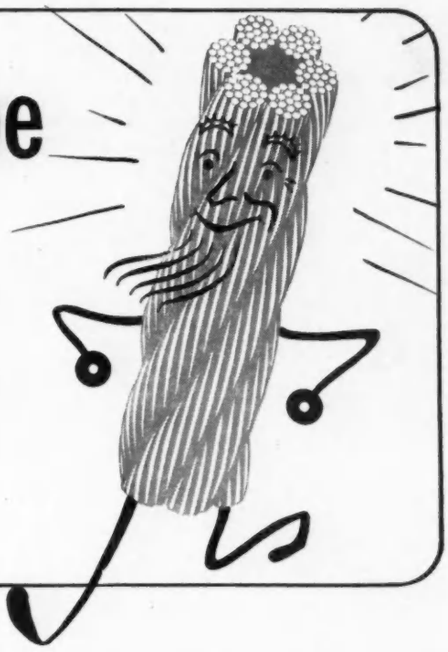
Estimates Compiled by The OIL WEEKLY

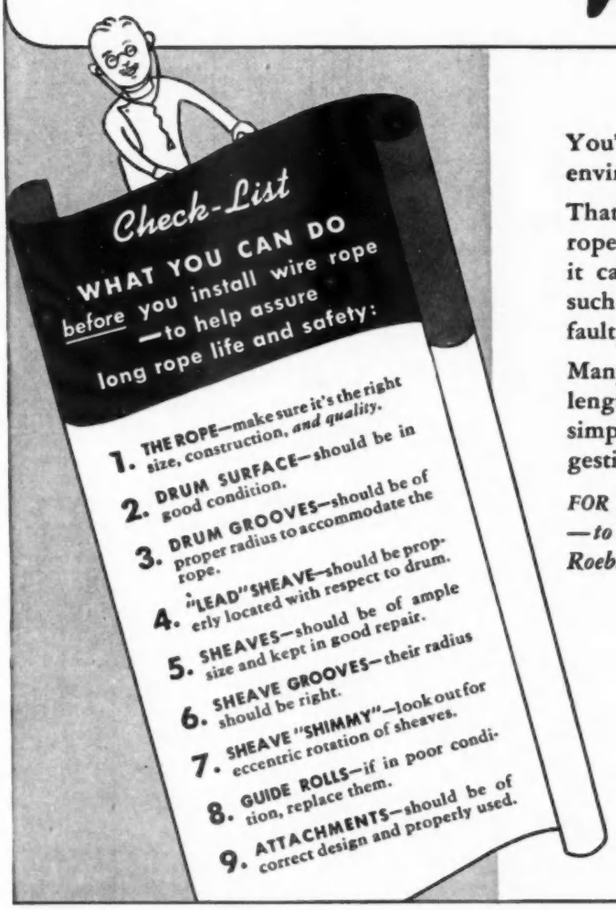
DISTRICT OR STATE	Bureau of Mines Estimate of Daily Demand (August)	State Allowable (Barrels Daily in August)	BARRELS DAILY FOR WEEK ENDED Aug. 23	Aug. 30
TEXAS—				
Texas Panhandle	.....	.....	76,100	79,700
North Texas	.....	.....	100,600	100,500
West Central Texas	.....	.....	30,400	30,800
West Texas	.....	.....	273,500	275,100
East Central Texas	.....	.....	84,500	85,300
East Texas Field	.....	.....	370,100	369,700
South Texas	.....	.....	219,800	220,200
Texas Gulf Coast	.....	.....	290,400	290,400
Total Texas	**1,361,000**	**1,355,502§**	**1,445,400**	**1,451,700**
CALIFORNIA—				
Long Beach	.....	.....	39,100	39,800
Midway-Sunset	.....	.....	44,500	44,000
Kettleman Hills	.....	.....	38,900	38,400
Wilmington	.....	.....	86,200	84,600
Others	.....	.....	425,600	425,200
Total California	**641,000**	**610,000***	**634,300**	**632,000**
OKLAHOMA—				
Oklahoma City	.....	.....	84,350	86,500
Seminole Area	.....	.....	111,250	113,300
Others	.....	.....	229,250	231,725
Total Oklahoma	**492,400**	**415,000**	**424,850**	**431,525**
ILLINOIS—				
Salem	.....	.....	79,600	79,200
Louden	.....	.....	60,200	61,000
Centralia	.....	.....	9,150	9,000
Other New Pools	.....	.....	214,800	226,900
Old Pools	.....	.....	11,800	10,500
Total Illinois	**390,000**	.....	**375,550**	**386,600**

DISTRICT OR STATE	Bureau of Mines Estimate of Daily Demand (August)	State Allowable (Barrels Daily in August)	BARRELS DAILY FOR WEEK ENDED Aug. 23	Aug. 30
LOUISIANA—				
North Louisiana	.....	.....	74,100	77,850
South Louisiana	.....	.....	249,300	254,100
Total Louisiana	**324,500**	**325,081**	**323,400**	**331,950**
KANSAS	**240,800**	**242,800**	**254,500**	**254,300**
NEW MEXICO	**112,900**	**112,900**	**114,500**	**114,500**
EASTERN STATES—				
Pennsylvania Grade	74,500	.....	73,300	73,600
Others, Eastern	24,400	.....	18,500	18,500
Total Eastern States	**98,900**	.....	**91,800**	**92,100**
MOUNTAIN STATES—				
Wyoming	85,000	.....	81,500	83,100
Montana	20,000	.....	20,200	20,300
Colorado	4,400	.....	3,750	3,850
Total Mountain States	**109,400**	.....	**105,450**	**107,250**
MICHIGAN	**36,000**	**40,000†**	**42,500**	**42,150**
INDIANA	**22,100**	.....	**19,200**	**20,300**
ARKANSAS	**80,700**	**74,428**	**73,900**	**74,100**
MISSISSIPPI	**25,200**	.....	**48,500**	**47,800**
NEBRASKA	**4,400**	.....	**6,750**	**7,500**
‡Total 8 Prorated States	**3,289,900**	**3,175,711**	**3,313,350**	**3,332,225**
Total United States	**3,940,000**	.....	**3,960,600**	**3,993,775**

*** Recommendation of Conservation Committee of California Oil Producers.**
† Estimate of actual production under prescribed regulations, which do not fix a definite state total allowable.
‡ Texas, California, Oklahoma, Louisiana, Kansas, New Mexico, Arkansas, Michigan.
§ Texas Railroad Commission's estimate of actual net daily production, allowing for usual under production of 3½ percent under net allowable, which at the beginning of August is calculated at 1,404,665 barrels daily. However, allowable normally increases as new wells are completed. Under August order, most Texas fields were ordered shut down August 2, 3, 9, 10, 16, 17, 23, 24, 30 and 31. Panhandle was ordered shut down August 3, 10, 17, 24 and 31.

Give your Wire Rope *a chance to Live Long!*




Check-List
WHAT YOU CAN DO
before you install wire rope
—to help assure
long rope life and safety:
1. THE ROPE—make sure it's the right size, construction, and quality.
2. DRUM SURFACE—should be in good condition.
3. DRUM GROOVES—should be of proper radius to accommodate the rope.
4. "LEAD" SHEAVE—should be properly located with respect to drum.
5. SHEAVES—should be of ample size and kept in good repair.
6. SHEAVE GROOVES—their radius should be right.
7. SHEAVE "SHIMMY"—look out for eccentric rotation of sheaves.
8. GUIDE ROLLS—if in poor condition, replace them.
9. ATTACHMENTS—should be of correct design and properly used.

You've often heard this: "Don't blame him—blame his environment".

That's an expression that often can be applied to wire rope, too. For when wire rope trouble is encountered, it can be traced, in a great many instances, to causes such as inadequate rope care, improper rigging, or faulty equipment.

Many wire rope troubles can be avoided—rope life lengthened—rope safety increased—by taking a few simple precautions *before* installing wire rope. For suggestions, see the Check-list to the left.

FOR COMPLETE INFORMATION regarding wire rope care —to meet your individual requirements—consult the nearest Roebling representative. He will gladly cooperate.

ROEBLING *Lines*

FOR THE OIL FIELDS

FOR INSTANCE—STOP SHEAVE "SHIMMY"!

When a sheave itself is "out of round" in its circumference or has been worn eccentric, it will set up a whipping action in the rope. See right.

Watch out for this trouble. If it persists—rope life and rope safety are sure to suffer.

JOHN A. ROEBLING'S SONS COMPANY TRENTON NEW JERSEY

Branches in Principal Cities Export Division: 19 Rector St., New York, N.Y., U.S.A. Cable Address: "Roebling's", New York

Distributed by THE NATIONAL SUPPLY COMPANY

CRUDE OIL PRICES IN CALIFORNIA

Prices per barrel in field, posted by Standard Oil Company of California, effective May 23, 1941
All gravities above those quoted take highest price offered in that field

Gravity	Signal Hill (Long Beach)	Wilmington	El Segundo	Seal Beach	Huntington Beach	Inglewood	Playa del Rey	Olinda, Brea Canon	Athens-Rosecrans	Torrance	Richfield	Whittier East Coyote (La Habra)	Montebello	West Coyote Hills	Santa Fe Springs	Newhall, Kern River, Kern Front, McKittrick, Round Mountain	Greeley, Canal, Wasco	Coles Levee	Mountain View	Elk Hills, Buena Vista Hills, Midway-Sunset, Lakeview Area	Lost Hills	Coalinga	Kettleman Hills	Elwood Terrace
14-14.9	....	$0.68	....	....	$0.71	....	....	$0.70	....	$0.70	$0.70	$0.70	$0.72	....	....	$0.73	....	....	....	$0.73	$0.73	$0.73	....	....
15-15.9	....	.71	....	....	.75	$0.76	....	.72	....	.72	.71	.72	.72	....	....		....	....	....	.73	.73	.73	....	....
16-16.9	....	.74	$0.79	....	.79	.79	....	.75	....	.74	.73	.75	.72	....	....		....	....	....	.73	.75	.73	....	....
17-17.9	....	.78	.82	....	.82	.82	....	.78	....	.77	.76	.78	.72	....	....		....	....	....	.75	.78	.73	....	....
18-18.9	$0.80	.82	.86	....	.86	.85	....	.81	....	.80	.79	.82	.74	....	....		....	....	....	.78	.81	.73	....	....
19-19.9	.84	.86	.90	....	.89	.88	....	.85	....	.83	.82	.85	.77	....	....	Wheeler Ridge	....	....	$0.73	.81	.84	.75	....	....
20-20.9	.88	.90	.94	....	.93	.92	$0.80	.88	....	.86	.85	.89	.80	....	....		....	....	.76	.85	.87	.77	....	....
21-21.9	.92	.94	.98	....	.96	.95	.84	.91	....	.89	.89	.92	.84	....	....		....	....	.79	.90	.90	.80	....	....
22-22.9	.96	.98	1.02	$0.88	.99	.98	.87	.95	....	.93	.93	.96	.87	....	....	$0.76	....	....	.83	.94	.93	.83	....	....
23-23.9	1.00	1.02	1.05	.92	1.02	1.01	....	.98	....	.97	.98	1.00	.91	....	....	.80	....	....	.87	.99	.96	.86	....	....
24-24.9	1.03	1.06	1.07	.97	1.05	1.04	F.O.B.	1.01	....	1.01	1.02	1.03	.94	$0.99	....	.83	....	....	.90	1.03	.99	.89	....	....
25-25.9	1.07	1.09	1.10	1.01	1.08	1.07	Our	1.04	....	1.05	1.06	1.07	.98	1.02	....		....	....	.94	1.07	1.01	.92	....	....
26-26.9	1.11	1.12	1.12	1.06	1.11	1.10	Pipe	1.08	....	1.09	1.10	1.11	1.01	1.06	....	....	....	....	.97	1.11	1.04	.95	....	....
27-27.9	1.15	1.15	1.15	1.10	1.14	1.14	Line	1.11	....	1.13	....	1.15	1.05	1.10	$1.04	....	....	....	1.01	1.15	1.07	.98	....	....
28-28.9	1.18	1.18	1.17	1.15	1.17	1.17	....	1.14	....	1.17	....	....	1.08	1.13	1.08	....	....	....	1.04	1.19	1.10	1.00	....	....
29-29.9	1.20	1.21	....	1.19	1.20	1.20	....	....	$1.17	....	....	....	1.12	1.17	1.12	....	....	....	1.07	1.24	1.13	1.02	....	....
30-30.9	1.23	1.24	....	....	1.23	1.22	....	....	1.21	....	....	....	1.15	1.21	1.15	....	$1.01	$1.09	1.10	1.28	1.16	1.04	....	F.O.B
31-31.9	....	....	....	....	....	1.24	....	....	1.25	....	....	....	1.19	1.24	1.19	....	1.04	1.12	1.14	....	....	1.06	....	Ship
32-32.9	....	....	....	....	....	....	....	....	1.29	....	....	....	1.23	1.28	1.23	....	1.07	1.14	1.17	....	....	1.09	....	....
33-33.9	....	....	....	....	....	....	....	....	1.32	....	....	....	1.27	....	1.26	....	1.10	1.17	....	....	....	1.11	....	$1.22
34-34.9	....	....	....	....	....	....	....	....	1.36	....	....	....	1.31	....	1.30	....	1.13	1.20	....	....	....	1.13	....	1.25
35-35.9	....	....	....	....	....	....	....	....	....	....	....	....	1.35	....	....	....	1.16	1.22	....	....	....	....	$1.23	1.28
36-36.9	....	....	....	....	....	....	....	....	....	....	....	....	1.39	....	....	....	1.19	1.25	....	....	....	....	1.26	....
37-37.9	....	....	....	....	....	....	....	....	....	....	....	....	1.43	....	....	....	1.22	....	....	....	....	....	1.29	....
38-38.9	....	....	....	....	....	....	....	....	....	....	....	....	1.47	....	....	....	1.25	....	....	....	....	....	....	....
39-39.9	....	....	....	....	....	....	....	....	....	....	....	....	1.51	....	....	....	....	....	....	....	....	....	....	....
40-40.9	....	....	....	....	....	....	....	....	....	....	....	....	1.53	....	....	....	....	....	....	....	....	....	....	....

tention was made that the price reductions would be of no benefit to the consumer but would only result in a more acute gasoline and lubricants scarcity.

In lowering postings as ordered by the price administration, South Penn Oil Company issued a statement of its president, P. H. Curry, as follows: "The prices of Pennsylvania grade crude oil issued by the Joseph Seep Purchasing Agency of the South Penn Oil Company have always heretofore been based on supply and demand. There is a continuing heavy draft on stocks of Pennsylvania-grade crude. The office of the Petroleum Coordinator has been emphasizing a shortage of crude and petroleum products on the Eastern Seaboard of emergency proportions.

"The price reduction will no doubt have the effect of restricting instead of stimulating activity to increase the production of crude in Pennsylvania, New York state, West Virginia, and Southeastern Ohio. A confirmation of this is wave of protest that is being made by producers and refiners."

Some refiners stated that the ceiling on crude prices would enable them to figure better on their operations.

In accordance with the government order, Bradford-Allegany crude was lowered August 25 by 23 cents to $2.75 a barrel. Southwest Pennsylvania crude was cut 23 cents to $2.40, and Eureka, West Virginia, oil the same amount to $2.34.

Acceptance of the bid of Perry Petroleum Company, Denver, of 16 cents a barrel premium above the Secretary's established minimum price, for the future sales of federal royalty oil from the Lance Creek, Wyoming, field, was announced August 27 by the Interior Department.

Department officials said the contract marked the successful culmination of Secretary Ickes' campaign for higher returns for the royalty oil, which in May, 1939, was initiated with a demand that bidders offer a price at least 37 cents a barrel higher than the published field price, subsequently modifying that demand to 25 cents.

It was said that as a result of the higher prices offered, the government will secure an additional revenue of nearly $1,500,000 over the next 8 years.

Supplies of gasoline were everywhere tight, as strong demand during the Labor Day holiday period was generally anticipated.

Light fuel oils and kerosene were not neglected, and in some instances refiners were quoting higher prices, as the season for heating approached.

Tightness of supplies of lubricants brought some further advances in quotations on both bright stocks and neutrals by Mid-Continent refiners.

Further Illinois Rise Helps Push Production to New High

United States crude oil production climbed again into new high ground, in averaging 3,993,775 barrels daily during the week ended August 30. The output was about 33,000 barrels a day greater than that in the previous week, which had broken all previous records, and it exceeded by 53,775 barrels the daily average market demand for domestic crude in August, as estimated by the United States Bureau of Mines.

Instrumental in causing the increase for the week was a further rise of 11,000 barrels in Illinois production, which has been staging a steady come-back. The state averaged 386,600 barrels daily, nearly as much as indicated market demand.

Eastern States Crude Oil Prices

FIELD—	Flat Price	Date Posted
Bradford-Allegany	$2.75	8-25-41
Sw. Pa. Pipe Line	2.40	8-25-41
Eureka Pipe Line, W. Va.	2.34	8-25-41
Corning Grade, Ohio	1.31	5-27-41
Buckeye Crude, Ohio	2.30	6-18-41

Major Crude Oil Price Changes

	Penna. Grade	Mid-Cont. (36 Gr.)	Calif. (26 Gr.)
Jan. 9, 1936	.....	Up 10	.....
Jan. 13, 1936	Up 15	.....	.....
Mar. 7, 1936	.....	.....	Up *18
Dec. 28, 1936	Up 12	.....	.....
Jan. 28, 1937	.....	Up 12	.....
Feb. 24, 1937	Up 10	.....	.....
June 7, 1937	Up 15	.....	.....
Sept. 1, 1937	Cut 22	.....	.....
Oct. 12, 1937	Cut 25	.....	.....
Dec. 1, 1937	Cut 15	.....	.....
Mar. 7, 1938	Cut 17	.....	.....
June 13, 1938	Cut 25	.....	.....
Sept. 1, 1938	Cut 12	.....	.....
Oct. 11, 1938	.....	Cut 20	.....
Jan. 21, 1939	Up 12	.....	.....
Feb. 2, 1939	Up 8	.....	.....
Mar. 6, 1939	Up 12	.....	.....
Oct. 6, 1939	Up 25	.....	.....
Nov. 1, 1939	Up 15	.....	.....
Dec. 1, 1939	Up 10	.....	.....
Jan. 1, 1940	Up 25	.....	.....
Feb. 1, 1940	.....	.....	Cut *7
May 22, 1940	Cut 25	.....	.....
June 18, 1940	Cut 25	.....	.....
July 12, 1940	Cut 25	.....	.....
Aug. 28, 1940	Cut 15	.....	.....
Nov. 12, 1940	Up 15	.....	.....
Dec. 17, 1940	Up 15	.....	.....
Jan. 27, 1941	Up 15	.....	.....
April 1, 1941	.....	Up 5	.....
April 23, 1941	Up 10	.....	.....
April 24, 1941	.....	.....	Up *6
May 19, 1941	.....	Up 10	.....
May 21, 1941	Up 15	.....	.....
May 22, 1941	.....	.....	Up *6
June 18, 1941	Up 20	.....	.....
Aug. 14, 1941	Up 23	.....	.....
Aug. 25, 1941	Cut 23	.....	.....

* Signal Hill 26 gravity.

GRAVITY-SCALE CRUDE OIL PRICES IN MID-CONTINENT FIELDS

Posted in most instances between May 19 and May 21, 1941

GRAVITY	Oklahoma-Kansas: Stanolind, Gulf, Texas, Skelly, Barnsdall, Tidewater, Sinclair, Phillips	Oklahoma-Kansas: Carter, Magnolia, Shell	North Louisiana-Arkansas: [1]Rodessa, etc.	North Louisiana-Arkansas: [2]Champagnolle, etc	North Louisiana-Arkansas: Bunkie, Eola, Olla, (by Standard)	North Louisiana-Arkansas: Lisbon, La. (by Gulf)	North Louisiana-Arkansas: [3]Atlanta, Buckner, etc., Ark.	Inland Texas and New Mexico: North and West Central Texas	Inland Texas and New Mexico: [4]Eastern Texas	Inland Texas and New Mexico: West Texas, [17]Panhandle, New Mexico	South Texas: [5]Refugio Type	South Texas: [6]Mirando Type	Texas Gulf Coast: [7]Gulf Coast	Texas Gulf Coast: [8]Anahuac Type	Texas Gulf Coast: [9]Dickinson Type	Louisiana Gulf Coast: [10]Gulf Coast	Louisiana Gulf Coast: [11]Standard of La.	Louisiana Gulf Coast: [12]Texas Co.	Louisiana Gulf Coast: [13]Texas Co.	Louisiana Gulf Coast: [14]Magnolia Pet. Co.	Louisiana Gulf Coast: [15]Shell Oil Co.	Louisiana Gulf Coast: Jennings (by Gulf)	[16]Rocky Mt. Area (Salt Creek, etc.)
17-17.9	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
18-18.9	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
19-19.9	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
20-20.9	$0.85	$0.75	....	....	....	....	$0.68	$0.78	$0.80	$0.70	$1.08	$1.03	$1.06	$0.98	$0.93	....	....	....	....	$0.94	....	....	....
21-21.9	.87	.78	....	....	....	....	.70	.80	.82	.72	1.10	1.05	1.08	1.00	.95	$1.06	....	....	....	.96	....	....	....
22-22.9	.89	.81	....	....	....	....	.72	.82	.84	.74	1.12	1.07	1.10	1.02	.97	1.08	$0.90	....	....	.98	$0.99	....	....
23-23.9	.91	.84	....	....	....	....	.74	.84	.86	.76	1.14	1.09	1.12	1.04	.99	1.10	.92	....	....	1.00	1.01	....	....
24-24.9	.93	.87	$0.88	$0.86	$0.98	....	.76	.86	.88	.78	1.16	1.11	1.14	1.06	1.01	1.12	.94	....	....	1.02	1.03	....	....
25-25.9	.95	.90	.90	.88	1.00	....	.78	.88	.90	.80	1.18	1.13	1.16	1.08	1.03	1.14	.96	....	....	1.05	1.05	....	....
26-26.9	.97	.93	.92	.90	1.02	....	....	.88	.92	.82	1.20	1.15	1.18	1.10	1.05	1.16	.98	....	....	1.08	1.07	....	....
27-27.9	.99	.96	.94	.92	1.04	$0.81	.80	.90	.97	.84	1.22	1.17	1.20	1.12	1.07	1.18	1.00	....	....	1.11	1.09	....	....
28-28.9	1.01	.99	.96	.94	1.06	.83	.82	.92	1.01	.86	1.24	1.19	1.22	1.14	1.09	1.20	1.02	....	....	1.14	1.11	....	....
29-29.9	1.03	1.02	.98	.96	1.08	.85	.84	.94	1.03	.88	1.26	1.21	1.24	1.16	1.11	1.22	1.04	....	....	1.17	1.13	....	....
30-30.9	1.05	1.05	1.00	.98	1.10	.87	.86	.96	1.05	.90	1.28	1.23	1.26	1.18	1.13	1.24	1.06	$1.06	....	1.19	1.15	....	....
31-31.9	1.07	1.07	1.02	1.00	1.12	.89	.88	.98	1.07	.92	1.30	1.25	1.28	1.20	1.15	1.26	1.08	1.08	....	1.21	1.17	....	$0.96
32-32.9	1.09	1.09	1.04	1.02	1.14	.91	.90	1.00	1.09	.94	1.32	1.27	1.30	1.22	1.17	1.28	1.10	1.10	$1.05	1.23	1.19	....	.98
33-33.9	1.11	1.11	1.06	1.04	1.16	.93	.92	1.02	1.11	.96	1.34	1.29	1.32	1.24	1.19	1.30	1.12	1.12	1.07	1.25	1.21	....	1.00
34-34.9	1.13	1.13	1.08	1.06	1.18	.95	.94	1.04	1.13	.98	1.36	1.31	1.34	1.26	1.21	1.32	1.14	1.14	1.09	1.27	1.23	$1.07	1.02
35-35.9	1.15	1.15	1.10	1.08	1.20	.97	.96	1.06	1.15	1.00	1.38	1.33	1.36	1.28	1.23	1.34	1.16	1.16	1.11	1.29	1.25	1.09	1.04
36-36.9	1.17	1.17	1.12	1.10	1.22	....	.98	1.08	1.17	1.02	1.40	1.35	1.38	1.30	1.25	1.36	1.18	1.18	1.13	1.31	1.27	1.11	1.06
37-37.9	1.19	1.19	1.14	1.12	1.24	....	1.00	1.10	1.19	1.04	1.42	1.37	1.40	1.32	1.27	1.38	1.20	1.20	1.15	1.33	1.29	1.13	1.08
38-38.9	1.21	1.21	1.16	1.14	1.26	....	1.02	1.12	1.21	1.06	1.44	1.39	1.42	1.34	1.29	1.40	1.22	1.22	1.17	....	....	1.15	1.10
39-39.9	1.23	1.23	1.18	1.16	1.28	....	1.04	1.14	1.23	1.08	1.46	1.41	1.44	1.36	1.31	1.42	1.24	....	1.19	....	....	1.17	1.12
40 & Up	1.25	1.25	1.20	1.18	1.30	....	1.06	1.16	1.25	1.10	1.48	1.43	1.46	1.38	1.33	1.44	1.26	....	1.21	....	....	1.19	1.14
							1.08	1.18	1.27	1.12	1.50	1.45	1.48	1.40	1.35	1.46	1.28	....	1.23	....	....	1.21	1.16
																1.48	1.30	....	1.25	....	....	1.23	1.18
																						1.25	1.20

[1] Gulf schedule for Caddo, Homer, Haynesville, Bull Bayou, Crichton, De Soto, El Dorado and Rodessa, Texas. Standard of La. schedule for Cotton Valley, Rodessa, Shreveport (Cross Lake). Magnolia schedule for Haynesville, Cotton Valley, Rodessa, and Miller Co., Ark. Texas Co. schedule for "North Louisiana."

[2] Schedule of Standard of La. for Caddo, De Soto, Sabine, Fouke, Homer, Miller Co., Sugar Creek. Schedule of Root Petroleum Co. for Nick Springs, Urbana light, Schuler sweet, Rainbow, South Field (El Dorado), and Champagnolle.

[3] Schedule of Standard of La. for Atlanta, Buckner, Magnolia, Schuler: Jones sand, Village. Schedule of Root Petroleum Co. for Schuler: Reynolds lime, and Schuler: Jones sand.

[4] Humble schedule for Anderson, Cherokee, Limestone, and Navarro counties and Navarro Crossing field, except that prices from 80 to 92 cents represent postings only for Hawkins field, Wood County. Rodessa, Texas, prices are same as in Rodessa, La.-Ark.

[5] Schedule for Refugio, E. White Point, Greta, Melon Creek, Midway, Minnie Bock, O'Connor-McFaddin, Plymouth, Saxet, Taft, and Tom O'Connor.

[6] Schedule for Blanchard, Bridwell, Colorado, Comitas, Eagle Hill, Escobas, Fitzsimmons, Glen, Government Wells (N. and S.), Heyser, Hoffman, Kelsey, Kohler, Loma Novia, Lundell, Manila, Mirando Valley, Placedo, Randado, Sarnosa, and Tesoro.

[7] Humble schedule for Amelia, Clear Lake, Goose Creek, Hastings, Magnet, Mykawa, Mykawa new, Raccoon Bend, South Thompsons, Sugarland, Thompsons, Webster. Texas Co. schedule for Arrioia, Ganado, Hamman, Hillje, Humble, Kubela, Magnet, Manvel, Markham, Maurits, Old Ocean, Pickett Ridge, Port Neches, Sour Lake, West Columbia, Withers. Pan American Prod. Co. schedule for Hastings and South Houston. Gulf schedule for Spindle Top, Sour Lake, Lovells Lake, West Beaumont, Goose Creek, South Liberty, Big Creek, Blue Ridge, Fannett, Moore, Barbers Hill, Hankamer, Thompsons, Lochridge, Dyersdale, and Hull (old) crudes. Sun schedule for Barbers Hill, Batson old, Cotton Lake, Esperson below 35 gravity, Goose Creek, Greens Lake, Hull below 25, Humble below 35, Nome, North Dayton below 25, Orange, Saratoga, Sour Lake, South Liberty. Point, Flahers' Reef, Hull old and new, Pierce Junction, Red Fish Reef, Turtle Bay fields. Sun schedule for Anahuac, Caplen, and Turtle Bay. Gulf schedule for Anahuac, Hull new. Pierce Junction, Orange and Thompsons deep.

[8] Humble schedule for Dickinson, Gillock, Hardin, League City, and Rowan fields. Pan American Prod. Co. schedule for Gillock crude.

[9] Sun Oil Co. schedule for Bayou Blue, Chacahoula, Fausse Pointe, Hackberry (E. and W.), and Vinton. Texas Co. schedule for Bay St. Elaine, Caillou Island, Iberia, Lake Barrek, Lake Pelto, Leesville and Port Barre for crude ranging in gravity up to 27-27.9; for lighter oils in those fields see Footnote 12. Gulf schedule for Edgerly, Starks, Vinton, E. Hackberry Cameron Meadows, Leesville. Deduct 10 cents for Gulf's prices for Timballer Bay, Grand Bay, Quarantine Bay, and West Bay. Deduct 2 cents for Standard of La. prices for University (Baton Rouge) crude of 30 to 35.9 gravity.

[10] Standard of La. schedule for Bayou Mallet, Choctaw, Darrow, Jeanerette, Lirette, N. Crowley, S. Crowley, Port Barre, Potash, Roanoke, St. Martinville. Deduct 10 cents for Anse La Butte.

[12] Texas Co. schedule for Bateman Lake, Dog Lake, Fausse Point, Horseshoe Bayou, Jefferson Island, Plumb Bob, Vermilion Bay, West Cote Blanche, and Delta Duck Club. Add 8 cents to these prices for Texas Co. postings for 28 or higher gravity at Bay St. Elaine, Caillou Island, Iberia, Lake Pelto, Leesville, Port Barre, and Lake Barre.

[13] Texas Co. schedule for Delta Farms, Golden Meadows, Lake Salvador.

[14] Magnolia schedule for Lockport, Cameron Meadows, West Gueydan.

[15] Shell Oil Co. schedule at Iowa, Black Bayou, White Castle. For Shell's prices at Roanoke and Chalkley fields deduct 5 cents. For Shell's prices at Gibson, South Houma, Hester, and West Lake Verret fields deduct 10 cents.

[16] Sinclair-Wyoming Oil Co. prices at Salt Creek, Lost Soldier, Iron Creek, effective May 20, 1941. Deduct 10 cents for East Mahoney and deduct 20 cents for Mahoney and Wertz.

[17] Add 3 cents for Panhandle prices.

Mid-Continent Flat Prices

FIELD—	Flat Price	Date Posted
Arkansas:		
Big Creek, Dorcheat, McKamie	$1.15	5-22-41
Smackover, Heavy	.83	5-22-41
Louisiana, North:		
Cotton Valley Distillate		
Cotton Valley (Holloway Sand)	1.30	5-22-41
Lisbon Distillate	1.25	5-22-41
Louisiana, South:	1.20	5-22-41
Erath	1.21	5-21-41
Garden Island	1.36	5-21-41
Happytown	1.15	5-20-41
Lafitte, Paradis	1.19	5-21-41
Lake Arthur & Tepetate	1.18	5-21-41
Lake Mongoulois	1.36	5-21-41
Ville Platte	1.20	5-21-41
Texas:		
Alice, Benavides (No. Sweden) Ben Bolt, Clark-Muil, Sun and Tom Graham	1.35	5-21-41
Cayuga	.90	5-21-41
Clay Creek	1.00	5-22-41
Cleveland	1.26	5-21-41
Conroe	1.43	5-21-41
Darst Creek	1.14	5-21-41
Esperson 35 gravity and above and S. Esperson (Sun Oil Co.)	1.30	5-22-41
East Texas, Flag Lake	1.25	5-20-41
Flour Bluff, East Flour Bluff, and La Rosa	1.33	5-21-41
Hockley-Cochran Counties	.87	5-21-41
Livingston, Cleveland	1.25	5-20-41
Long Lake	1.23	5-21-41
Luling	1.05	5-21-41
Lytton Springs	1.17	5-21-41
North Rincon	1.35	5-22-41
Salt Flat, North Salt Flat, Darst Creek, Hilbig, Carroll, Clark, Zoboroski	1.14	5-21-41
Satsuma, Tomball	1.40	5-21-41
Sun Oil Co. at Batson (new), Fig Ridge, Hardin, Hull 25 and above, Humble 35 and above, LaBelle, North Dayton 25 and above, Oyster Bayou, Seabreeze, South China, West Orange, and Willow Slough	1.25	5-22-41
South Cotton Lake	1.35	5-22-41
Sun	1.35	5-22-41
Talco	.79	5-21-41
Van	1.08	5-21-41
Yates (Deep)	.95	5-20-41
Yates (Shallow)	.82	5-20-41

Michigan Prices

Central (Basin):		
Porter, Greendale, Crystal, Wise, Midland, Vernon, Saginaw	$1.44	5-27-41
Buckeye, Edenville, Bentley, Beaverton, Monitor, Kawkawlin	1.42	5-27-41
Freeman, Lincoln, Sherman Redding, Temple, Winterfield	1.39	5-27-41
Hamilton-Grout	1.29	5-27-41
Adams	1.27	6- 1-41
Arenac, Clayton, Ogemaw, W. Branch	1.24	5-27-41
Southwest (Shallow):		
Traverse crude in Allegan, Kent, Ottawa, Van Buren Cos.	1.45	6- 2-41
Clare	1.11	5-27-41

Middle West Prices

FIELD—	Flat Price	Date Posted
Lima, Ohio	$1.17	5-28-41
Illinois Basin (Sohio Corp.)	1.37	5-19-41
Lake Centralia-Salem, Illinois	1.37	5-19-41
Eastern Ill.-Western Ind.	1.22	5-21-41
Western Kentucky	1.32	5-21-41
Birk City, Western Kentucky	1.32	5-21-41
Kentucky River, Eastern Ky.	1.43	6-19-41
Big Sandy River, Eastern Ky.	1.38	6-19-41

Rocky Mountain States Prices

Colorado:		
Canon City and Florence	$0.95	4- 1-41
Iles	.97	4- 1-41
Montana:		
Cat Creek	1.15	4- 1-41
Cut Bank	1.00	1- 1-40
Dry Creek	1.02	5-20-41
Sunburst	1.00	5-20-41
New Mexico:		
Artesia		
Hogback	.94	5-21-41
Wyoming:	1.00	10-11-38
Big Muddy		
Byron	1.03	4- 1-41
Elk Basin	.55	10-11-38
Frannie, Light	1.00	5-21-41
Frannie, Heavy	.70	5-20-41
Garland	.47	5-20-41
Grass Creek, Light	.50	10-11-38
Grass Creek, Heavy	1.00	5- 1-41
Hamilton Dome	.50	5-20-41
Lance Creek (Ohio Oil Co.)	.45	5-20-41
Mill Creek	1.12	7- 1-41
Oregon Basin	.72	10-11-38
Osage	.40	4-20-40
Poison Spider	1.30	10-11-38
Rocky River	.59	10-11-38
Tensleep	1.15	5-21-41
	.6515	2- 1-41

Washington Roundup

[*Continued from page 13*]

Plantation Pipe Company's projected line from Baton Rouge to Greensboro, North Carolina, necessary to the national defense and conferred upon it the right of eminent domain.

The line is the first to be undertaken under the act, but there is little expectation that it will be completed until well into next year. When constructed, however, it will carry 60,000 barrels of products a day, sufficient, it was estimated, to supply half the gasoline requirements of North and South Carolina, Alabama, Georgia and Mississippi, if devoted to that product.

Originally projected to deliver 32,000 barrels a day, the capacity of the line has been upped twice and may be further increased, possibly to as much as 90,000 barrels, by the construction of additional pumping stations.

Planned for construction last year, the line was halted by the refusal of the Georgia railroads to permit it to cross their rights of way. Failure of the Georgia legislature to enact remedial legislation led to a demand for Congressional action resulting in the introduction and adoption of the Cole bill.

The company seeks a 100-foot strip for the line, which will have branches running to Montgomery and Birmingham, Alabama; Columbus and Macon, Georgia, and Chattanooga and Knoxville, Tennessee.

Shortage

To assure vacationists of supplies over Labor Day, the oil administration authorized an advance draft on September quotas so that filling station tanks could be filled August 30 and 31.

For the week immediately prior to Labor Day, however, it was ordered that such gasoline as still remained due service stations be divided into five equal daily quotas. It was left to the individual station operators to determine how they were to sell and some, which early exhausted their quotas, were forced to go out of business temporarily.

The pre-Labor Day supplies were charged against the September quotas, but officials expressed the view that pleasure travel would fall off heavily following the holiday.

First petition for an increase in quotas was filed with President Roosevelt and Deputy Coordinator Davies August 25 by Governor Maybank of South Carolina.

In a letter to the President and in a personal conversation with Davies the Governor asked that his state be given an increased quota to prevent a "disastrous" shortage of gasoline during army maneuvers scheduled for October and November.

By the beginning of the week, the situation had Davies "talking to himself," and the results of his conversations were issued in the form of a question-and-answer explanation of current conditions.

In that statement, answering his own questions, he told the people they could still buy gasoline, could make trips in safety over Labor Day, will still get gasoline after September 1 and the East Coast won't run out of gasoline entirely "if motorists conserve."

Fix Prices

On the application of the American Automobile Association, Leon Henderson on August 27 issued a schedule of retail prices for gasoline in 40 major Eastern cities which, in general, were those in effect before issuance of the OPACS curtailment order, but provided no machinery for enforcement of their application.

The AAA had complained that heavy increases in prices were being made by some retail dealers, and was told by Henderson that "price advances complained of have been under investigation and study by this office even before the allocation program was instituted."

Those studies, he said, indicated that there had been no advances by major companies in their tank wagon prices and that dealers making advances "are either misled by unjustified fear of drastic restriction in operations or in certain cases are wilfully profiteering at the expense of motorists."

In its schedule of prices, OPACS allowed a margin of four cents per gallon for dealers as "justified by the lower volume of sales on which stations will have to operate as long as supplies are curtailed." That margin, however, it was said, is not intended to serve as a standard when the emergency is over.

Labor Day Gasoline . . .

In preview, the intricate plans for rationing gasoline on the East Coast in the closing days of August and around Labor Day appeared filled with potentialities for inequalities toward consumers and resultant vociferous protests, besides a lot of trouble as well as loss of business volumes for service-station operators, many of whom barely make a living under normal conditions.

It was indicated, of course, that the desired curtailment of consumption would be achieved, at least partially, as suppliers had the responsibility of restricting deliveries to all service stations.

However, it appeared impossible that the station operators, in turn, could or would dispense their allotments evenly among consumers, considering human nature among both the operators and their customers.

It was indicated that even under maximum effort of operators to be impartial, there would be large-scale side-stepping of the restrictions by motorists, through splitting up of purchases among different stations. In the case of cash customers who traded with different stations and of transients, there could be no prorating of sales on the basis of former business; and credit customers, prorated by regular suppliers, could buy extra supplies for cash at other stations.

Reject Gasoline Tax Raise

Preparing to submit the new tax bill to the Senate shortly after Labor Day, the Senate Finance Committee last week rejected Treasury proposals previously turned down by the House for an increase in the gasoline tax.

The committee not only refused the 1-cent increase proposed by the department, which would have returned an estimated revenue of $255,000,000, but also voted down a suggestion for a ½-cent increase.

Nevertheless, the oil industry and its members will find themselves paying even stiffer taxes than provided in the House version of the bill, as a result of the committee's action in lowering the personal exemptions to $750 for single persons and $1,500 for heads of families, which will have the effect of raising surtaxes all along the line; changes in the corporation levies and revision of excise taxes.

Adverse conditions in Cuba

which oil companies believe should be corrected in the supplemental trade agreement which is to be negotiated with that country will be outlined before the Committee for Reciprocity Information September 10 by Thomas W. Palmer of Standard Oil Company of Cuba.

President Speaks

Irked by recurrent rumors that Britain was trimming the lend-lease program to her own advantage, President Roosevelt, at a press conference, spoke out in vigorous condemnation of what he called an effort to sabotage that policy, declaring among other things that the British have not used American tankers to maintain their own oil export trade.

The President also told the assembled newspaper men that gasoline conditions along the Atlantic Coast should be better by next spring, when new tankers will be in service and two pipe lines from the Southwest should be completed.

If No More Diversions

However, he admitted, that prospect depends on the assumption that England's tanker fleet will not be further seriously depleted by sinkings by her enemy.

Mr. Roosevelt, in caustic mood, pointed out that reports that the British are maintaining their normal oil trade at our expense are generalizations, and asked for details.

He pulled no punches in charging that an organized campaign is under way to sabotage the lease-lend program by the spreading of falsehoods, half-truths, rumors and distortions of fact, and took up, seriatim, a series of reports which he said were definitely inaccurate.

Synthetics

The Department of Agriculture during the week announced that its "pilot" plant for production of motor fuel from farm products has been practically completed at the Peoria, Illinois, research laboratory and will shortly begin experimental production of alcohol, first from corn, then from sweet potatoes, white potatoes, wheat and other carbohydrate crops.

The plant will have a productive capacity of 500 gallons of alcohol a day, to be used in the development of motor fuels which will be tested in various types of engines.

World-Wide Developments

Push Toward Settlement of Mexican Expropriation Matter

Scattered indications continue to point toward impending solution of the controversy between the Mexican government and foreign oil companies whose properties, variously estimated from $400,000,000 downward, in Mexico were expropriated. The American government is unquestionably active in the matter. Settlement of this trouble would go far in improving political relations between the United States and Mexico. Next month the Mexican congress convenes and there is evidence that another effort to conclude a settlement will be made.

Although official statements from Washington are lacking, it is understood that American and Mexican government representatives have been striving toward a solution this year, with the result that an announcement may be made within several weeks. Authoritative sources in the oil industry declared last week that they had no information from Washington regarding terms of a settlement. However, from other sources are reports of a pending American government loan of between $30,000,000 and $60,000,000 to Mexico, out of which payments might be made to the oil companies.

Early in August, Eduardo Villasenor, director of the Bank of Mexico, was quoted in the Mexico City press as anticipating a general solution of various problems between the United States and Mexico, including the expropriation controversy, by next month. An American dispatch from Mexico City on August 20 reported a similar feeling among Mexican officials, who foresaw possible early political changes.

Near East Oil Fields Drawn Closer to British

Oil field and refining centers in the Near East last week were drawn more securely into British dominance than at any other time in the war when swift British thrusts were made into Iran to end that country's toleration of a potentially dangerous German "tourist" population. Oil in the Near East and the adjacent Russian Caucasus occupies a prominent position on the military stage.

The British-Russian drive into Iran follows by several months the successful British efforts to drive hostile forces from Iraq and Syria. Quick action prevented extensive sabotage of a pipe line running from the Iraq fields to the Haifa refinery of Consolidated Refineries Ltd., and saved the refinery from destruction or capture. Although no longer transported to Great Britain, the products from that refinery are of value to the British Mediterranean fleet. The plant has a crude capacity of about 40,000 barrels daily. Normal Iraq crude production is much higher than this figure, averaging 84,000 barrels daily in 1939. Following cessation of Iraq fighting last May it was reliably reported that damages to the pipe line had been repaired and that crude was flowing to the Haifa refinery.

The British subsequently put an end to the pro-Axis Vichy government's evident intention to allow Syria to fall into German hands. Syria's capitulation put the Tripoli leg of the Iraq pipe line into British control, though that leg is at present relatively unimportant. The major result was to dispel the threat of a German campaign directed from Syria against Iraq.

The allied drive into Iran last week promises to close a gap in British controlled territory from eastern Iraq to Indian and to relieve southern Russia of a potential German threat from Iran. At the same time, the Iranian invasion strengthens British control of Anglo-Iranian Oil Company's fields which produced 79,100,000 barrels last year, the Koweit fields, the field and refinery at Bahrein and the Abadan, Iran, refinery of Anglo-Iranian Oil Company, Ltd., a plant of 285,000 barrels per day crude capacity on the Persian Gulf. Thus, virtually the entire producing and refining resources of the Near East are, at least for the time being, firmly in British hands.

Possible loss of life among Anglo-Iranian Oil Company employes and their families was guarded against last week when air-borne troops landed in the oil fields and at Abadan. New York representatives of the company declare a majority of the women and children had previously been removed to Australia and India, although employes were not taken from their posts. Attitude of the Iranians toward the British workers is reported friendly. No cessation of operations by Anglo-Iranian is anticipated.

Seek Change in Colombian Law to Speed Development

An important alteration of Colombia's oil law 160 of 1936 will be effected if a proposed amendment offered to congress by Minister of Mines and Petroleum, Dr. J. P. Manotas is ratified.

The measure would provide that decisions of the Colombian supreme court be final instead of provisional in cases where permits are sought to drill on private lands or where individuals seek to obstruct applications for concessions from the government. As the law stands decisions of the court are provisional for two years and may be contested within that period, the result being that drilling in Colombia has been seriously handicapped by threat of prolonged litigation.

On the Barco, Colombian Petroleum Company was drilling hard sand in Socuavo 1 at 9850 feet, drilling sand and shale in Tres Bocas 2-A at 1615 feet, and drilling sand and shale in South Sardinata 1 at 4536 feet.

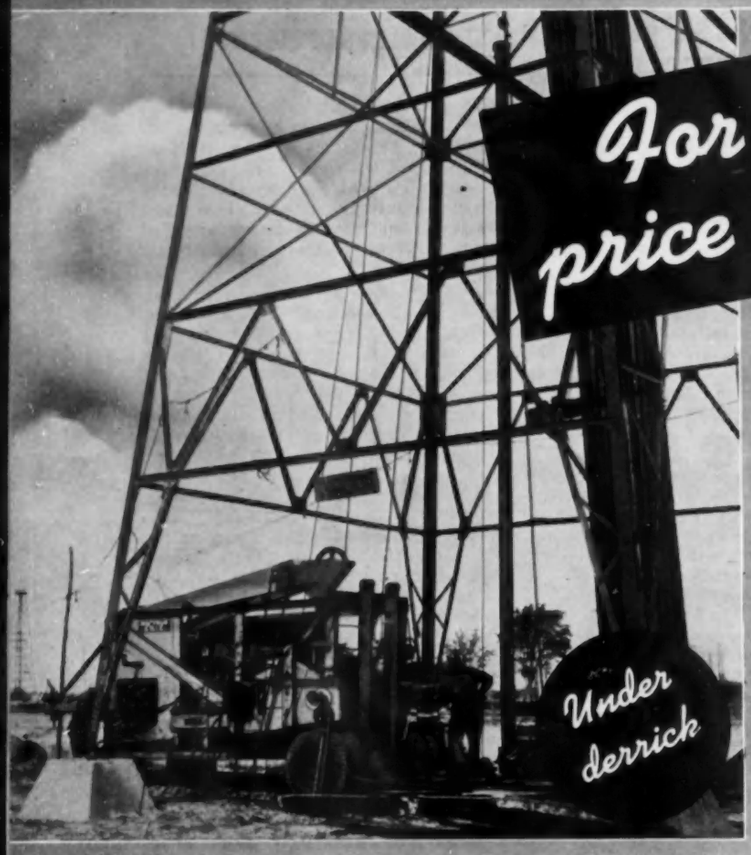
Mexico Adds Oil Well

Completion of a 10,000-barrel well, Poza Rica 53, in the Poza Rica field of Mexico is reported by Petroleos Mexicanos, the government oil company. Production came from 8107 feet.

Last April, the company reported another large producer, Escalin 1, good for 12,000 barrels, in the same field.

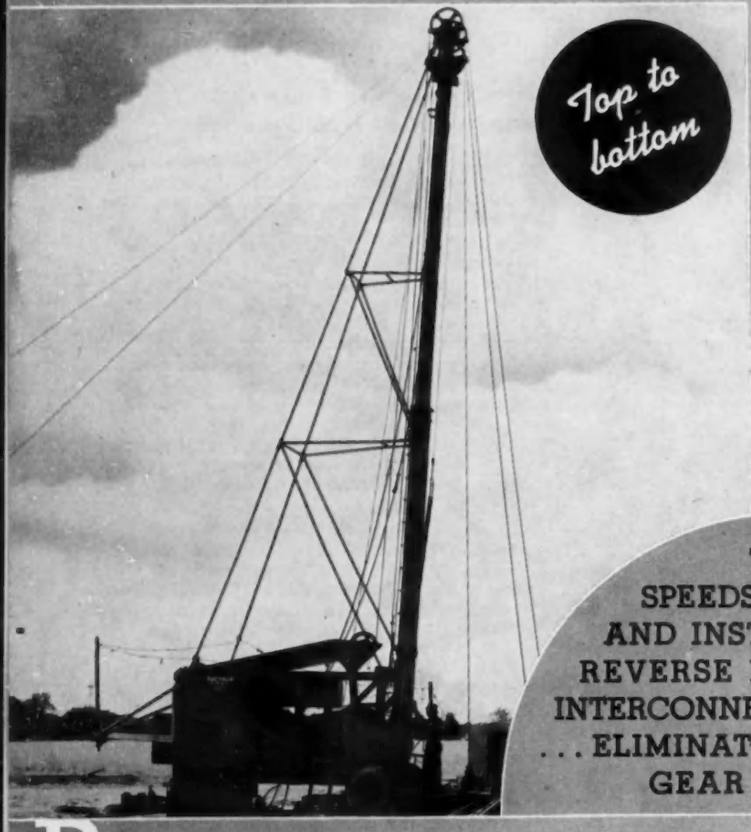
TWO RIGS IN ONE

For the price of one

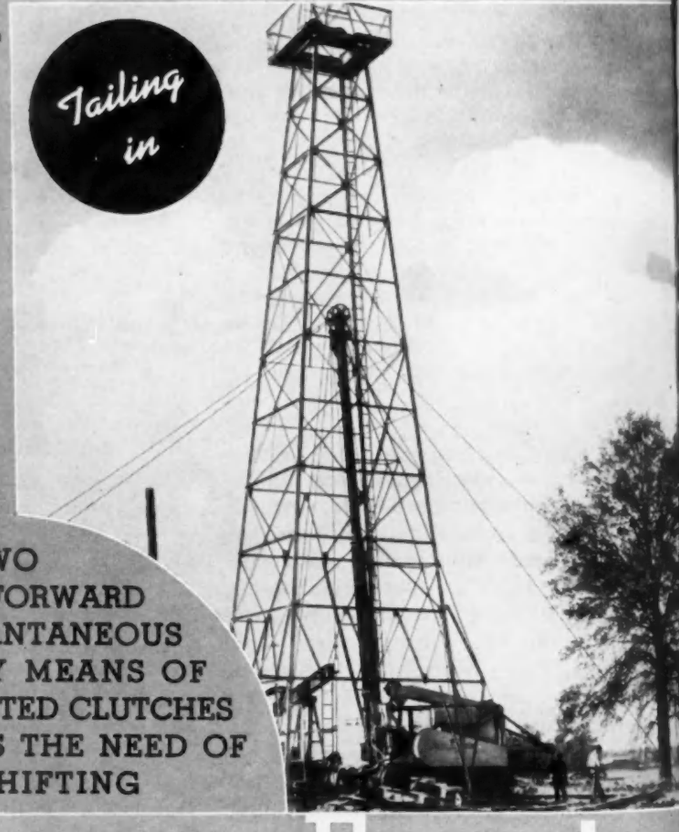


Under derrick

Standard mast



Top to bottom



Tailing in

TWO SPEEDS FORWARD AND INSTANTANEOUS REVERSE BY MEANS OF INTERCONNECTED CLUTCHES ... ELIMINATES THE NEED OF GEAR SHIFTING

Bucyrus-Eri

SOUTH MILWAUKEE, WISCONSI

U. S. FIELD OPERATIONS

Oklahoma

Okfuskee County Strike Opens Ninth 1941 Pool

Ninth 1941 Okfuskee County discovery flows 427 bbls 11 hours; Northeast Edmond pool discovery, Oklahoma County, increases flow 15 to 240 bbls day; Lincoln County semi-wildcat flows 7,000,000 ft gas from unidentified formation above Second Wilcox; Osage pool extended ½ mi north.

Okfuskee County: Shell Oil Co.'s Heffner 1, SE NW NW 17-11n-9e, mi northwest West Okemah pool and mi southeast Catle pool, Hunton lime 3872-3962 ft, 10 holes 3930-40 ft, 143 bbls oil, 1,500,000 ft gas 2½ hours; 427 bbls 11 hours, 1375 lbs shut-in tubing pressure; Booch 3025 ft, Cromwell zone 3380 ft, Cromwell sand 3386-3446 ft for show oil, Mayes 3725 ft, Wooford 3852 ft, Hunton 3872 ft, Sylvan 3962 ft, Viola 4042 ft, Second Wilcox 4114 ft, td 4127 ft, electric log kicked 3928 ft, 4½-in 4004 ft. Company's Palmer 1, SW NW SW 6-10n-9e, east of East Cromwell pool, 75 bbls oil, 332 bbls water 24 hours, plugged back 3925 ft in Hunton, testing.

Oklahoma County: Harper & Turner's Harper 1, NWc SW 17-14n-2w, Northeast Edmond pool discovery, Chicken Farm (Bartlesville sand) 5882-5925 ft, initialed 15 bbls oil day through tubing, increased 240 bbls daily. Operators' Kunc 1, NW SW NW 33-14n-2w, 2 miles south Harper 1, Bartlesville 5819-44 ft, Brown lime 5855 ft, Base Penn-Hunton 5870 ft, td 6132 ft Viola, electric log, plugged back 5870 ft, ran bailer, cleaned self and shut in for tankage.

Lincoln County: R. L. Kemp et al's Lowry 1, SEc SW 28-17n-5e, northeast Agra pool, old total depth 4002 ft Second Wilcox, 5½-in 3996 ft, gas broke in between surface and oil string, perforated 3 holes 3550 ft, bailed down and gas cleaned hole, zone unidentified, 7,000,000 ft day, 1200 lbs rock pressure, may complete as gas well.

Osage County: Anderson-Prichard Oil Corp.'s Osage 14, SW NE SW 32-28n-8e, ½-mi north unnamed area, Oswego 2160 ft, Mississippi 2473 ft, pay 2507-17 ft, sprayed 25 bbls oil, 3,500,000 ft gas, 800 pounds rock pressure, shut in for tankage. Norbla Drilling Co. et al's Osage 1, SWc NE 9-26n-5e, between Burbank and Kaw pools, Oswego 2830-65 ft, Skinner 2995-3010 ft, Burbank 3040-50 ft, Mississippi Chat 3122-35 ft, Mississippi lime 3135 ft, abnd 3210 ft.

Beaver County: T. R. Lofland et al's Fee 1, C W½ SE 13-6n-21e, 10 miles southeast Hugoton gas field, 8-inch casing top Dolomite 2652 ft, drilled 1400 ft water 2744 ft, deepening 2950 ft.

Love County: J. S. Batson et al's Walden 1, C NE NW NW 34-6s-2e, 3½ miles northeast Marietta, shot Viola lime 520 qts 2475-2703 ft, testing, previously swabbed 2 bbls hourly after 3000 gals acid 2595 ft. Magnolia Petroleum Co.'s Wilson 1, SW SE NW 12-7s-2e, 4 miles northwest Marietta, Sycamore lime 4244-4620 ft, Woodford 4670-4780 ft, rotating 5000 ft lime.

East Stroud: Shell Oil Co.'s Miller 1, NEc NW 6-14n-7e, south end of production, broken Prue sand 2927-32 ft, 10 bbls oil, abandoned as uncommercial.

Kansas

Elk County Receives Arbuckle Strike; Russell Pool Extended

Forest Hill pool, Russell County, extended ⅝-mile southeast; Arbuckle lime discovery Elk County; Ellis County wildcat pumped 125 barrels 15 hours; Peace Creek pool, Reno County, extended with 3000-bbl well.

Russell County: Central Petroleum Co.'s Hilgenberg "A" 1, C S½ SE NW 20-15-12w, southeast Forest Hill pool, Arbuckle 3285 ft, drilled in 3295 ft, 5-in casing 3285 ft, drilled plugs, 600 ft oil first hr, 1400 ft oil 5 hrs, will jet 500 gals acid into coarse semi-porous lime. Company's Hilgenberg "B" 1, C S½ SE NE 18-15-12w, wildcat, Lansing-Kansas City lime 3021 ft, Arbuckle 3310 ft, 5-in casing 3310 ft, drilling plugs. Offsets for Forest Hill discovery awaiting spacing program.

Helmerich & Payne et al's Jennrich 1, C W½ NW SE 13-12-15w, 3 mi east Trapp pool, water after perforating, Lansing-Kansas City 2937-3187 ft, deepening to test Arbuckle.

Ellis County: Darby Petroleum Corp.'s Dreiling 1, SEc NW 28-13-17w, South Catherine pool discovery, Lansing 3259 ft, pay 3341-51 ft, 1000 gals acid, 125 bbls oil, 107 bbls water 15 hrs, testing. Operators' Giebler 1, C E½ NW SE 27-13-20w, Arbuckle 3832 ft, water, abnd 3850 ft.

Peace Creek Pool: Cities Service Oil Co.'s Kreie "B" 1, NE NW SE 21-23-10w, Viola 3770 ft, 5½-in casing 3774 ft, total depth 3794 ft, large flow prevented draw-down potential, rated 3000 bbls, second well for pool. Republic Natural Gas Co.'s Snowbarger 1, NE SW NE 21-23-10w, 700 ft oil 2 hrs, 1100 ft oil 3 hrs, increasing, Viola lime 3764 ft, 5-in casing 3771 ft, total depth 3784 ft.

Elk County: Allison & Phillips Petroleum Co.'s Porter 1, NW NE NW 25-28-8e, between Ferrell and Shambaugh pools, Mississippi 2547 ft, Arbuckle 2519 ft, 7-in 2915 ft, total depth 2919 ft, 1700 ft oil 22 hrs, 33-gr, 50 bbls daily.

Barton County: W. N. Bartlett et al's Wondra 1, SE NE NE 5-17-13w, West Ainsworth pool discovery, Arbuckle 3357-61 ft, 1500 gals acid, 1000 gals butane, 296 bbls oil. H. B. Mabee, W. O. Allen et al's Stoskopf 1, NWc 29-16-13w, Stickney pool discovery, Arbuckle lime 3373-90 ft, 31 bbls oil 2½ hrs, taking potential. Helmerich & Payne et al's Schultz 1, C E½ NE NE 8-20-15w, drilling 3500 ft, and Schmidt 1, C E½ NE SE 20-20-15w, 2000 ft.

Pawnee County: Max Cohen et al's English 1, SWc, NE 1-21-15w, 10 miles northeast Larned, Arbuckle 3627 ft, 7-in 3627 ft, cored stain 3629-31 ft, drilling plugs.

Illinois Basin

Extensions Loom for Clay And White County Areas

A mile south extension of Clay County's Sailor Springs field was indicated; New Haven field, White County, may be extended ½-mile north; Gallatin County wildcat swabs oil and water; first Devonian production in Lawrence County.

Clay County: B. F. Williams' Keck 1, NE NE SW 34-4n-7e, mile south prdouction Sailor Springs field, waiting on cement with pipe on Tar Springs, total depth 2323 ft; cored 8 ft saturation.

Hamilton County: Cameron Brothers' Lockwood 1, NE NE NW 23-6s-5e, ½ mile south Barden discovery, abandoned more than a year ago through dry McCloskey, flowing through a load of water from Aux Vases, 3083-3117 ft., former total depth 3285 ft. Texas Co.'s Knight 1, NW NW NE 13-6s-5e, offsetting Shell's Lower O'Hara discovery, running electrolog 3311 ft. after coring McClosky saturation. Kingwood's Johnson 2, third producer in field, NW SE NE 14-6s-5e, flowed 869 bbls. 24 hours from Aux Vases 3149-86 ft., total depth 3189 ft.

White County: Hiawatha Oil Co.'s Todd 1, SE SE SE 18-7s-11e, ½-mile north production in New Haven field, cored Cypress pay 446-53, waiting on cement; drill stem 210 ft. of oil, 10 ft. mud, no water, one hour. Yingling and Hays' Shepard 1, NE NE NE 5-4s-10e, wildcat 6 miles west of Calvin, drilling plug to test Cypress pay, topped 2900 ft., total depth 3187 ft., elevation 383 ft., Glen Dean 2647 ft.

Gallatin County: Sinclair-Wyoming's C. F. Williams 1, SE SW NW 2-8s-9e, swabbed 18 bbls. oil, 200 bbls. water, 24 hours, McClosky 2877-84 ft., 3000 gals. acid; elevation 376 ft., Glen Dean 2316 ft., Benoist 2681 ft., Aux Vases 2805 ft., St. Genevieve 2864 ft.

Lawrence County: Big Four Oil & Gas Co.'s L. Gillespie 35, C N½ SW SE 26-3n-12w, in old Lawrence County field, pumped 45 bbls. oil 24 hours from Devonian 3259-3360, after 400 gallons acid; first Devonian production in county. Well deepened from McClosky at 1820; topped Devonian 3443.

Jefferson County: Yingling's McMillen 1, SW NW SW 36-2s-1e east extension Woodlawn field, swabbed 33 barrels hour Benoist sand, testing. With 48 operations, Woodlawn is most active field in Illinois.

Wayne County: Shell Oil Co.'s Turner 4, C S½ NW NW 34-1n-6e, Roundprairie (Johnsonville) field, 4299 bbls. 18 hours, natural, McClosky 3052-56 and 3058-71, total depth 3081. Glen Dean 2502, Cypress 2782, Aux Vases 2934, St. Genevieve 2994, second largest completion in field's history.

Clinton County: Texas Co.'s Price Gray 1, C S½ NW SE 35-3n-1w, drilling 2580 for Devonian, expected 2600-50; cored saturation Benoist 1200-25. Glen Dean 895, Cypress 1074, Weiler 1082, Benoist 1197, Aux Vases 1236.

New Tar Springs Area Attracts Two Stakes

There were two new operations in new Tar Springs pool west of Caborn pool, Posey County, Indiana.

Posey County: James Lindas located Duckworth 1, NE SW NE 25-6s-13w, ¼-mile southwest Central States Oil Co.'s Breeze 1, recent Tar Springs sand discovery west of Caborn field.

Abandoned through Cypress at 2400 ft was Paul Rossi's Dempsmeyer 1, NW NW NE 32-6s-12w, wildcat 2 miles southeast of Breece 1. Drilling at 900 ft was Charles Loveless' Dausman 1, NE NW NE 25-6s-13w, Gulf Refining Company farmout. In west Lynn Township, north of Savah, Morgenstern Oil Corp.'s Harry Mentzer 1, SW NW NE 34-5s-14w, wildcat, drilling 1800 ft.

Nebraska

Harlan County Wildcat Reports Six Oil Shows

Six Lansing-Kansas City oil shows in Harlan County wildcat; water overcomes initial Harlan County oil strike.

Harlan County: Veeder Supply & Development Co. et al's Alter 1, C W½ SW NW 15-1n-18w, north of Kansas state line, near Alma, Shawnee group 2980 ft, Topeka 3165 ft, Lansing 3350 ft, oil shows 3353-58, 389-95, 3405-08, 3439-41, 3486-90, 3570-74, Marmaton 3575 ft, Sooy 3789 ft, Viola 3847 ft, Simpson 3920 ft, Arbuckle 3958 ft, total depth 4210 ft, dry, plugged back 3375 ft after running electric log, to rip casing opposite Lansing-Kansas City lime shows. Operator's Battin 1, C N½ SE NW 15-2n-18w, 6 miles north Alter 1, completed cement squeeze before resuming test, to reperforate zone 3541-65 ft, and rip casing 3385-90 ft, hole showing oil and lots of water.

Richardson County: Harry Harper et al's Horn 1, C S½ NE SE 35-3n-16e, northeast Falls City pool, Hunton 2498 ft, total depth 2654 ft, 5½-in casing 2653 ft, 10 shots 2630-34 ft, 12 shots 2152-2200 ft, water, plugged back 2573 ft, 46 shots 2521-44 ft, 550 ft water in hole, swabbed and bailed 24 hours, could not lower fluid level, 90 percent water in hole, abnd. Uhri Oil Corp.'s Ogle 1-A, NW SE SE 9-1n-14e, Dawson area, old total depth 2260 ft, deepened 2264 ft, plugged back 2252 ft, 500 gals butane, 200 gals acid, 125 bbls fluid 24 hours, 30 percent water, pumped oily water 72 hours, estimated 10 bbls oil, 200 bbls water 24 hours.

Otoe County: H. A. Risk et al's Rietsch 1, C SW SW 1-8n-10e, northeast Ogallaha, Granite Wash 1800 ft, abnd 1840 ft.

Gage County: S. F. Miller et al's Bethoud 1, C E½ NW SW 2-4n-6e, topped Reading 721 ft, 5-in 755 ft, drilling 1000 ft. Bee Dee Oil Co.'s Bankers Life 1, NWc SW16-3n-5e, cleaning out 130 ft. Nelson Drilling Co.'s Ideus 1, c w½ e½ sw 5-3n-7e, shut down 605 ft.

BRUCE H. McCULLY has been named supervisor of the Cooperative Oil Producing Association and the Cooperative Pipe Line Association, North Kansas City, Missouri.

North Texas

Two Montague County Wildcats Found Productive

Third prolific Mississippian well for New York City pool, Clay County. Small oil producer from Ellenberger on northwest edge K-M-A field, and second completion pending. Two of Montague County's trio of promising wildcat strikes on production; new pay given Hott-Davenport pool.

Clay County: Shell's Coleman 2-A, northwest offset its New York City pool discovery, flowed 211 bbls natural 1-hour gauge from saturation 6152-6286 ft in Mississippian, topped 6139 ft, flat with other completions that made bug initial after acid. Conglomerate in Bend, topped 5853 ft, at 5885-5909 ft recorded possible oil production, but cased off with 5½-in 6142 ft. Superior Oil Corp.'s Seigler-Shell 1, wildcat and 12½ miles south by west above pool, drilling dry conglomerate 6015 ft. Continental et al's Ross 3, southeast edge Ross-Jolly pool, completing in regular Bend pay 5378-5505 ft with acid through perforations, having abandoned try production in lower pay, which yielded 17 bbls oil 8 hours after 200-quart nitro shot 5615-5718 ft, total depth 5846 ft. Partnership's Ross 4, location north, flowed 603 bbls 43-gravity potential ½-in choke, used 8000 gallons acid Bend 5383-5493 ft.

Montague County: Gibson & Jennings, Inc.'s Howard 4, 2 miles southeast of Holt shallow pool, was flowing natural in pits while cleaning itself after reperforating opposite Lower Strawn sand 3930-40 ft, plugged back from granite 4506-15 ft. Water broke through cement behind casing on initial try for production through perforations. Shell's Thomas 1, 1⅝ miles northeast Holt pool, installing pumping unit after swabbing test yielded 15 bbls low-gravity oil 10 hrs following nitro shot 3034-47 ft, plugged back from Ellenberger 4144-4646 ft. Walter Gant et al's Turner 1, 5½ miles northeast Bowie and ½ mile southeast of junked wildcat producer, had difficulty procuring delivery on 5½-in oil string to test conglomerate 6222-38 ft in Bend, topped 6038 ft. Continental's Winder 1, projected 6500-ft wildcat 2 miles east Stoneburg, drilling 2020 ft, passed up nominal oil saturation in sands 485-500 ft, 530-45 ft and 920-60 ft.

Hott-Davenport: Lesh & McCall's Davenport 5, south edge pool in eastern Montague, deepened from 2373 ft, and found new deep pay 2479-84 ft. Well flowed 157 bbls oil natural 7 hours, then killed to cement 5½-in 2479 ft.

Clingingsmith: Sinclair Prairie's McCall 1, west offset its 6131-ft flowing well, drilling 6355 ft although upper pays 5305-20 ft and 5904-44 ft offered little encouragement for production. Company's Lemon 1, south offset discovery, yielded mud on drill-stem test 6148-65 ft in Bend, topped 5944 ft, and another drill-stem test pending 6168 ft.

Jack County: Magnolia's Borden 1, Ordovician project for northeast corner county, entered Bend 5515 ft, and drilling dry lime 5540 ft. Alma Oil Co.'s Maxey 1, 5 miles southeast Antelope and originally completed for small flow July from perforations 5278-5320 ft in Mississippian, toped 5255 ft, failed to increase its oil yield in deepening to 5448 ft and acidizing.

Wichita County: Huckelberry & Cline's Stone 4, first Ellenberger producer on northwest edge K-M-A deep area, swabbed 1-bbl oil hourly natural from dolomite 3715-26 ft. Failed to boost its yield after 2000-gallon acid treatment, and second treatment pending. W. T. Waggoner Estate's Fee 1-II, situated to west of above property, testing oil saturation in Ellenberger 3722-33 ft.

Foard County: Texas Co. et al's Johnson 3, which discovered Johnson Ranch oil pool at 3577 ft in 1933, encountered granite when deepened to 4567 ft.

West Texas

Ellenberger Produces in Todd Extension, Crockett County

Ellenberger production found by Crockett County deep pool extension. Nitro shot steps up oil yield for Lubbock County wildcat. Reagan County wildcat resumes flow after plugging back. Weekly volume completions at Slaughter field greatest in nation.

Crockett County: Amerada et al's Todd 1-B, mile northwest outpost Todd deep pool, recorded first Ellenberger production for area in yielding 48 bbls 40-gravity oil on 23-hour swabbing and flowing test after acidizing with 2000 gallons, perforations 6202-52 ft; plugged back from 6300 ft, and will be reacidized with 6000 gallons. Topped Crinoidal lime 6050 ft and Ellenberger 6202 ft, being 496 ft and 66 ft low, respectively, on these markers than nearest of field's 9 Crinoidal producers, indicating thinning of section between Crinoidal and Ellenberger. R. H. Henderson et al's Couch 1, western Crockett County wildcat and 4½ miles south by east of Olson 1-well pool, resumed testing with 5½-in 2157 ft. Filled with oil from sandy-lime 2166-80 ft while idle for casing.

Lubbock County: L. C. Harrison et al's Nairn 1, 3½ miles northeast Lubbock, averaged 10 barrels oil hourly on swabbing test after 460-quart nitro shot in Basal Clear Fork 4884-5002 ft. Fluid level stands between 2000 and 2500 ft, about doubled that reported prior to shot. Tubing will be removed to clean-out cavings, then possibly install packer to try for flow. Toped Clear Fork 4330 ft, elevation 3203 ft. No water reported in penetrating this section 672 ft. This strike advances Permian Basin production 35 miles east by north and to the south flank of buried granite plateau that separates the West Texas and Panhandle Permian districts.

Reagan Discovery: Amerada's University 1-R-A, southeast corner county and tagged Barnhart area, failed to enhance its oil yield in deepening to 9294 ft in Ellenberger, topped 8960 ft, elevation 2768 ft, and is awaiting acid treatment after plugging back to 9080 ft. Swabbed and flowed 95 bbls oil and 14 bbls water 25 hours before plugged back. Work underway on 2 new tests.

Slaughter: Western States Gasoline Corp's Frazier 13, near extreme southeast edge and in Hockley County, established new record potential with rating of 3152 bbls 32.6-gravity oil, acidized 10,000 gals 4870-4985 ft. This sector has highest average initial, and production

A.P.I. SPECIAL TRAIN TO SAN FRANCISCO

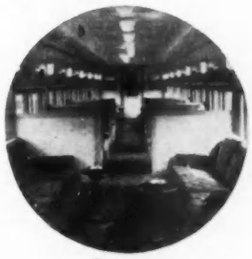
FOR 22nd ANNUAL MEETING—NOV. 3-7, 1941

HERE'S THE FAST A.P.I. SPECIAL TRAIN SCHEDULE

Lv. Houston	5:00 P.M.	—Oct. 30
Lv. San Antonio	10:00 P.M.	—Oct. 30
Ar. El Paso	1:00 P.M. (M. T.)	—Oct. 31
Lv. El Paso	1:30 P.M. (M. T.)	—Oct. 31
Ar. Los Angeles	9:30 A.M.	—Nov. 1
Lv. Los Angeles	8:05 P.M.	—Nov. 1
Ar. San Francisco	8:45 A.M.	—Nov. 2

M. T.—Mountain Time

Schedule permits **FULL DAY IN LOS ANGELES**—sight-seeing, visiting; attend annual football game of **CALIF. U. vs. UCLA**, 2 P.M., Nov. 1.



Lounge

FINE, MODERN AIR-CONDITIONED ACCOMMODATIONS

Take your choice: standard sleepers, sections, compartments, drawing rooms. Also for your pleasure: lounge car and dining car. Comfort of a fine hotel on speeding, safe wheels—plus the fun and fellowship of your friends.

Diner

Sleeper

Sample Round-Trips to San Francisco

FROM:		FROM:	
AUSTIN	$75.60	HOUSTON	$75.60
BEAUMONT	79.40	LUFKIN	81.00
BROWNSVILLE	85.60	McALLEN	84.45
CORPUS CHRISTI	79.60	NEW ORLEANS	89.25
CORSICANA	75.60	ORANGE	80.40
DALLAS	75.60	SAN ANTONIO	75.60
FT. WORTH	75.60	SHREVEPORT	82.50
GALVESTON	77.85	WACO	75.60
HARLINGEN	84.45		

Similar low-priced fares from other points. Fares good in Standard Sleepers (Pullman fare extra). Return limit 3 months.

GREAT SUNSET ROUTE

New Orleans—Houston—San Francisco

Map above shows the great **Sunset Route** over which your API special will speed from Houston to San Francisco. Map also shows how SP makes convenient connections at Houston with the Special: from New Orleans, Lake Charles, Beaumont, Shreveport, Lufkin, Galveston, Dallas, Ft. Worth, Waco, Austin, Corpus Christi, "Valley" points, Oklahoma.

See all of the Pacific Coast! If you plan on adding sight-seeing and vacation fun to your trip, you can see all the Pacific Coast via SP. Too, you may return home over another great SP route—**see twice as much at no extra cost!** Pictured above is SP's streamliner **Daylight** on its **Sunset Route** trip between Los Angeles and San Francisco. The **Daylight** skims for more than a hundred miles along the foamy edge of the Pacific.

MAKE RESERVATIONS EARLY!

Your local SP Agent will be glad to give you full information and make your Pullman reservations.

Southern Pacific

J. T. MONROE, Passenger Traffic Mgr.,
Southern Pacific Bldg., Houston, Texas

trend open to south, although narrow because of trio dry holes. Field is largest contributor of oil completions weekly, and development of proved acreage still short of halfway mark. Atlantic Refining Co.'s Boyd-Humble 21, first deep test for Cochran County sector of field, proved dry in the Glorietta near the 5700-foot level, and was drilling lime with streaks chert 6175 ft. Will proceed to Clear Fork.

Deep Wildcats: Plymouth Oil Co.'s Alford 1, east edge Upton County, drilling shale and sandy-lime 7880 ft, elevation 2669 ft. Passed up nominal gas shows 7095-7150 ft. Magnolia's Walton-State 20, intermediate test for Keystone and Kermits fields, drilling shaley-lime 8240 ft, possibly in uper Ordovician. Gulf and L. H. Wentz's Millar 1, Northeastern Pecos County Ordovician project, drilling lime 4015 ft, elevation 2577 ft. In Swisher County, Fred Devore et al acquired Krupp-Flaherty Oil Co.'s Kleen 1, 6 miles southwest Vigo Park along with 15,500-acre block, to deepen from 1744 ft to fulfill 5000-ft depth contract. In Briscoe County, Phillips Petroleum Co.'s Montague 1, C NW NE AB&M Section 6, Block B-4, starting on 6500-ft depth contract.

Abell: Stanolind's Simmons-Eastland 1, ⅝-mile east of production, flowed 20-barrel hourly rate from Sharp sand in Simpson, total depth 5455 ft. It is updip on structure, and nearest producer encountered unusual faulted condition in making small pumper 5914-40 ft. Construction is underway on the pool's first pipe line outlet, and is due to be in operation by October 1. In Conry-Davis pool, centering 4 miles to southeast of Abell, Stanolind's Conry-Davis 2, east offset to its discovery, yielded gas with little oil-cut mud on drill stem test in Permian 3889-3965 ft, and coring 3985 ft. Company's Smith 1, north offset, flowed 15 barrels oil hourly 1-in choke after acidizing perforations 3790-3825 ft, total depth 3900 ft, making third oil completion.

Taylor County — Lewis Production Co.'s Huddleston 1, east outpost for northwestern Taylor County pool opened by W. H. Peckham et al, drilling 2440 ft, passed up nominal show oil 2017-30 ft, equivalent to discovery pay. Deep Oil Development Co. and U. H. Griggs' Higgins 1, Lot 8, Section 3, D. B. Corley Survey, drilling 1830 ft.

Stephens County: Orion Daniel et al's Blach 1, SWc TE&L Section 1283 ft, plugged back from 4252 ft to try for completion in Bend saturation 3292-3301 ft. Tom G. Shaw et al's S. B. Stroud 1, first deep test for Strawn pool in northeast corner county, drilling lime 4295 ft.

Texas Hearings

The Texas Railroad Commission has scheduled several hearings for early September.

September 2, to determine the boundary separating the Hendrick, Kermit and Emperor deep fields in Winkler County.

September 5, on the application of American Liberty Oil Company for permission to operate a cycling plant in the Blessing field, Matagorda County.

September 8, special operating rules for the West Avoca field, Jones County.

September 12, for increased allowable for the Noelke pool, Crockett County.

East Texas

Pittsburg Pool Outpost To Seek Water Level

West outpost Pittsburg pool to seek water level before testing regular oil level in Travis Peak. Willow Springs two deep oil wells restored to production. Two projected Lower Marine wildcats slated for western Limestone County.

Camp County: Talco Asphalt & Refining Co.'s McKenzie-Shell 1, ¾ mile west Pittsburgh pool, drilling hard sand 8150 ft to establish water table before testing Travis Peak saturation, topped 7956 ft.

Gregg County: Humble and Gulf's Horton-Dickson 2, first oil producer for Willow Springs gas-distillate area, flowed 30 bbls, including 3 percent slightly brackish water, 24 hours 1-in choke, 1,924,000 ft gas after reacidizing new perforations 7262-91 ft. Well made better production performance when completed in July at higher level in Pettit. Roger Lacy et al's Horton-Dickson 1, also previously completed as oil well, cleaning in pits after reacidizing with 10,000 gallons. New perforations 7127-7280 ft in Pettit, topped 726 ft.

Trinity Wildcats: British-American Oil Producing Co.'s Young 1, western Henderson County, idle after flowing small volume 42-gravity oil with water from perforations 7739-48 ft and 7770-92 ft in basal Rodessa, plugged back from Travis Peak 8367-8474 ft. Roger Lacy et al's Flanagan 1, southern Gregg County, awaiting orders after yielding salt water from Pettit perforations 7220-60 ft, plugged back from 7502 ft.

Sub-Trinity Project: Farrell Drilling Co. et al will start early this month on J. Spencer Survey, Limestone County near the junction of Falls and McLennan counties, and 7 miles southwest of Prairie Hill. It will be carried to Smackover lime, or 6500 ft; 18,000-acre block, on secondary fault plane to the west of Mexia-Corsicana fault zone. Sun, Stanolind and Seaboard purchased 1000-acre spreads each at $6 per acre, and Magnolia bought 2000 acres.

Floyd Scott of Fort Worth, acting for major company, has taken 80,000-acre block, paralleling and extending beyond the above to the east with a deep drilling obligation. This projected deep activity arose from the establishment of a deep buried schist uplift with thick beds of Lower Marine on the east flank as outlined by wildcat failures.

Request Gas Storage Permit For Refugio County Field

Clymore Company has requested a permit from the Texas Railroad Commission to store gas in the 5700-foot sand in the Refugio field, Refugio County. Company engineers explained they plan to withdraw gas from sands between 5100 and 6800 feet, strip the gas, and then store what is not sold in the 5700-foot sand.

They expect that the gas injected will amount to between six and 12 million feet daily. Two wells would be used for injection purposes.

In LOS ANGELES

It's
HOTEL
CLARK

Nearest downtown hotel to HOLLYWOOD

WITH the movie capital of the world and western America's radio city within the borders of Los Angeles, entertainment reaches its zenith. Gay nights, laughter and life; sunny days filled with thrills and excitement. In the center of everything is situated the HOTEL CLARK at Fifth and Hill Streets. A hotel where you will enjoy hospitality to its fullest extent; where you will find your every wish anticipated. Whether you stay in Los Angeles for a few days or a month, choose Hotel Clark, downtown in the heart of things.

555 Rooms with Baths from $2.50

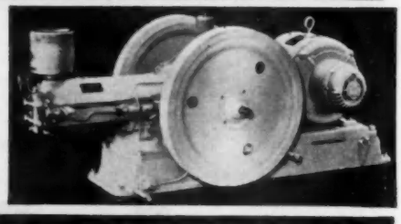
"Famous for Good Food from Coast-to-Coast"

Get All These Money-Saving Advantages of WITTE DIESELECTRIC PLANTS

1. QUALITY CONSTRUCTION
2. SUPERIOR ENGINEERING
3. EXTRA POWER AT LOW COST
4. RUGGED, COMPACT—PRACTICALLY NO WEAR OUT
5. EASY INSTALLATION—SIMPLE OPERATION

Give you power and light for 1c a K.W.H.; 3 to 30 K.V.A.; 1, 2 and 4 cylinders; vertical or horizontal; manual, electric or automatic control. Easy to buy. SEE YOUR SUPPLY DEALER, or write for facts.

1966 OAKLAND AVE. KANSAS CITY, MO.



WITTE ENGINE WORKS

• LARGEST BUILDER OF SMALL DIESELS •

Southwest Texas

Pending Production Deals May Involve $15,000,000

Two production deals involving between $12,000,000 and $15,000,000 gross consideration pending. One operator reliably reported negotiating for properties in Calhoun, Nueces and Refugio counties; another expected to complete deal for purchase of interests held jointly.

Lower Gulf Coast: Seaboard Oil Corp. of Del.'s Lane 1, 3500 ft nw distillate discovery, Odem field, San Patricio County, 157 bbls 33.9-gr oil, no water, ⅛-in choke, 780 lbs tubing pressure, casing sealed, new sand section 5280-5330 ft, perforated 5320-27 ft. Well one mile northwest Wellington Oil Co. tests which cored same sand but not completed. Opens area up-thrown side of fault, west side of Odem field. Four rigs running in field.

W. H. Spice's Lindsay & Reed 1, mi north Alice field, Jim Wells County, gas-distillate 5270-89 ft, dr 5710 ft, wait on orders, may set casing.

Sun Oil Co.'s Miller 1, ¼ mi west southwest side East Premont field, Jim Wells County, completed through perforations 5205-20 ft; slightly higher than well to east.

Transwestern Oil Co.'s Dunlap 4, ¼ mi west south extension East Premont field, Jim Wells County, casing 625 ft, completing; ran flat with well to east.

Douglas, Holland & Smith's Ira Hinnant 1, 1½ mi southwest Oakville field, Live Oak County, sands 8 ft lower than field, coring for 2400-ft sand.

Joe Stelzig et al's Everett 1, mi south White Creek field, Live Oak County, 9 ft good saturation sand 1846-56 ft, Ezzell zone, casing atop sand and testing; sand below producing level White Creek and extension to that area.

S. E. W. Oil Corp.'s First Trust Joint Stock Land Bank 1, 1743 ft northeast production North Agua Dulce, Nueces County, drilling 6250 ft on 7200-ft contract; cored oil sand 5560-89 ft to expand field with second well in sand.

San Antonio Area: Humble Oil & Refining Co.'s Rosa Wolf 1, Del Monte prospect. Zavalla County, drilling 6400 ft in black lime showing oil; reported to have had several important shows, may be new field.

Quintana Pet. Co.'s Washburn 3-A, Washburn area, LaSalle County, still removing 5-in casing with acid; will deepen from 11,032 to at least 12,000 ft.

Shell Oil Co.'s Wells 1, Hodges sur, southeast part Wilson County, rigging up 8000-ft Edwards lime test.

Wilcox Trend: Shell Oil Co.'s McManus 1, Brushy Creek prospect, Lavaca County, waiting on cement 11,007 ft; some report flowing oil, mud and wash water testing above this level in Wilcox; if correct, opens new field.

E. M. Jones' West Ranch 3-B, still testing, flowing oil, gas and salt water Carrizo sand; may squeeze and reperforate another level.

Mirando District: Bid-Rich Oil Co.'s Palacios, sec 287, ¾ mi east Randado field, Jim Hogg County, cored sand 2867-72 ft, 3.1 percent saturation, electric log, stuck tool, attempting to recover; will set casing; sand is first below Manila in Yegua, would open new field.

Transwestern Oil Co.'s W. T. Ferguson 1, sec 104, 1½ mi sw Campana field, McMullen County, cut fault deep in section, drilled Pettus sand 3054-73 ft, went to 3135 ft, electric log, side-wall samples showing possible saturation, 5½-in casing on bottom, preparing to test through perforations; may make gas well to extended field southwest.

Rio Grande Valley: W. R. Davis, Inc. credited with completion Arizona & Texas Citrus Co. 1, blk 8, 7200 ft se McAllen field, Hidalgo County, as large distillate well, sand 7650-70 ft, new sand and extends field.

Pan American Production Co.'s Burgess 1, mi southwest Willamar field, Willacy County, 120 bbls, ⅛-in choke, perforate 7950-ft sand, extending field.

Texas Gulf Coast

Jackson County's Texana Area May Have Oil Well

Texana area, Jackson County, promised first oil well.

Jackson County: Sinclair Prairie Oil Co.'s Volkmer 1, 2 bbls hour through 9/64-in choke, tubing pressure varying 200-600 lbs, casing pressure 0; 24 perforations 5102-06 ft; may be first oil Texana area.

Scattered Tests: Continental Oil Co.'s Frazer 1, east of Willis, drilling 8970 ft. Atlantic Refining Co.'s Foster Lumber Co. A-1, coring 9100 ft. Superior Oil Co.'s McWhorter 3, Lake Creek field, running protection string, to deepen from 11,012 ft.

Louisiana Gulf Coast

Terrebonne Parish Wildcat Shows Oil on Drill Stem

Wildcat in Lapyrouse area, Terrebonne Parish, flowed rate 19 bbls hour on drill-stem test.

Terrebonne Parish: Gulf Refining Co.'s Picou 1, Lapyrouse prospect, Sec. 70-20s-18e, perforated 10,942,946 ft 9 holes, flowed hourly rate 19 bbls oil; running tubing for production test; bottomed 12,149 ft, casing landed 11,397 ft.

Evangeline Parish: E. J. Nicklos' Reed 1, southwest outpost Pine Prairie field, missed Yegua sand; coring 8720 ft after encountering gas sand 8635-75 ft.

Iberia Parish: Plymouth Oil Co.'s Big Pigeon 1, deep test southeast of Bayou Pigeon field, drilling 11,175 ft in shale.

Assumption Parish: George H. Echols and J. Ray McDermott's Armelise Planting Co. 1, deep test east flank Napoleonville dome, spudded on 10,000-ft test.

St. Landry Parish: Brewster-Bartle Drilling Co.'s Richard 1, semi-wildcat in Cankton area, drilling 8850 ft after testing salt water in the Richard sand 8705-11 ft.

St. Martin Parish: Amerada and Phillips' State Arm of Grand Lake 1, wildcat in Lake Chicot area, taking side-wall cores, total depth 9593 ft.

Gibson Extension: Shell Oil Co.'s Realty Operators B-7, mile east of field, completed 225 bbls oil and same amount salt water 12/64-in choke 9474-9513 ft, field sand.

Ville Platte Deep Test: Continental Oil Co.'s Martha Haas 8, deep test Ville Platte field, Evangeline Parish, drilled 12,527 ft, electric log, plugging back to test the upper field sands.

Orleans Parish: W. T. Burton's L&N 2, Lake Catherine discovery, testing 22 bbls of oil daily along with a large volume of water, total depth 9886 ft.

La Fourche Parish: Gulf Refining Co.'s State 7 PP, Timbalier Bay area, drilling 11,745 ft in shale.

North Louisiana

Little Creek Wilcox Extended 1¾ Miles

Little Creek shallow Wilcox field, LaSalle Parish, extended 1¾ miles north; deep wildcats to be drilled this fall; Olla trend leasing still active.

Little Creek: Placid Oil Co. was completing Tremont Lumber Co. A-7, NE SE 24-9n-1e, LaSalle Parish, in Wilcox as 1¾-mile northeast extension; producing oil ungauged.

Deep Wildcats: Four wildcats 6000 ft or deeper will be drilled on recently assembled blocks. Harry W. Elliott et al will spud an 8500-ft test by November 10 on 10,000 acres centered around Sec. 4-7n-8e, Concordia Parish. In same parish, J. K. Hughes, Mexia, will spud 6000-ft test by September 6, north of Willette, west of Vidalia. Two miles southwest of Grand Cane and around Sec. 32-13n-14w, A. H. Lindahl, F. M. Gilliland et al will drill 3 6000-ft tests on 20,000-acre block.

Olla Trend Leasing: South of Catahoula Lake and in Catahoula, Concordia and LaSalle parishes, Carter Oil Co. and Phillips Petroleum Co. have decided to retain under lease 70,000 acres of Louisiana Delta Hardwood Lumber Co. land they had under geophysical option. Carter added 1300 acres of Vestal Lumber Co. acreage to block in Township 9 north, Range 8 east, and added 2400 acres in Township 10 north, Range 7 east, both in Catahoula Parish.

Arkansas

Stephens Field Gains Three Additional Locations

Three new locations for Travis Peak tests on flanks of Stephens field; second location for Schuler extension; deep wildcat tops Buckner; experimental pilot plant begins operations at McKamie.

Stephens: Three new locations seeking Travis Peak production on flanks of shallow Stephens field, Columbia County, that now apepars to run south and east: G. H. Vaughn's Smart 1, NW NW 13-15-20; Smart 2, NW NW 13-15-20; Crow Drilling Co.'s Smart 1, SE SE 12-15-20.

Quarter-mile south extension of Travis Peak in area looms at Fitzwater et al's Smart 1, NE NE 14-15-20, total depth 3416 feet in Travis Peak.

Schuler Extension: After several weeks devoted to arranging lease and royalty agreements, second location staked in 3-mile east extension of Schuler field, Union County, discovered productive of oil in Smackover lime by Crescent Drilling Co.'s W. A. Burns 1, NE SW 13-18-17. New location is At-

lantic Refining Co.'s W. A. Burns B-1, C NW SE 13-18-17.

Deep Wildcat: Checking 60 ft. lower than wells at McKamie, 6 miles east, Tide Water Associated's Moore 1, SW SE 29-17-24, LaFayette County, cored top Smackover lime after topping Buckner at 9111 ft., elevation 267 ft.

Pilot Plant: Carter Oil Co.'s experimental pilot plant at McKamie, LaFayette County, for sweetening McKamie sour gas, began operations. Lion Oil Refining Co.'s extraction plant for desulphurization of Magnolia field gas also began operations.

Mississippi

Tinsley Dome Outpost Makes Oil Well

Outposts at Tinsley completed; 9000-ft wildcat abandoned; deep Alabama wildcat reaches 10,000-ft contract; Florida leasing takes on new life.

Tinsley Outpost: W. G. Ray's Walker 1, C SE NW 2-9n-3w, southwest extension, completed in Woodruff 5042 ft, 316 bbls first 12 hours, free of salt water. Tops: Selma chalk 4940 ft, Woodruff 5027 ft.

Deep Wildcat: Sinclair Wyoming Oil Co.'s Community Pearl River 1, SE SE 28-9n-6e, Lake County wildcat, abandoned; elevation 409 ft. Tops: Tallahatta 822 ft, Wilcox 1102 ft, Clayton 3794 ft, Eutaw 4929 ft, Tuscaloosa 5435 ft.

Alabama: Union Producing Co.'s M. M. Waite 1, C NW NW 27-8n-1w, Clarke County, shut down 10,032 ft, contract depth, to run electric log, may deepen to 12,000 ft.

Florida: Sun Oil Co. added 37,653 acres of Volusia County land and 7000 acres in Flagler County, according to leases placed on record recently. Sun Oil Co. leased 1020 acres in Townships 5 and 6 south, Ranges 31 and 32 west, Escambia County.

Michigan

State's Deepest Finds St. Peter Dry; Reed City Extended

Reed City field extended mile northwest as another test indicates boundary on west side. State's deepest dry in St. Peter. New starts set all year high at 31.

Reed City: Gulf Refining Co.'s Campbell 1, C S½ SW SW 19-18n-10w, mile northwest extension well, topped Monroe lime 3586 ft, bottomed 3627½ ft, cores showing best saturation 3622-27 ft. Gulf's Maxine 1, C S½ NE NE 36-18n-11w, across county line into Pinora Township, west offset to 1200-bbl producer, bottomed 3665 ft against Monroe top 3622 ft; swabbing 8 bbls water, 3 bbls oil hr. Indicated first dry hole for field and west flank producing structure.

Deep Test: Gulf's Bateson 1, Section 2-14n-4e, Bay County, found St. Peter dry to 10,477 ft; to plug back to 7800 ft to test Salina distillate show.

Wildcats: H. H. Heinig's Dodge 1, SE SW SW 9n-8e, Genesee County, deepened 2 ft to 1894 ft, and again was testing Traverse pay; estimated good for 10 to 15 bbls day.

California

Kern County Wildcats Show Unfavorably

Kern County wildcat projects at Buena Vista Hills and Shafter failed to indicate commercial production; another test of Kettleman Hills Middle Dome slated.

Kern County: After showing fair gas blow 20 minutes on second formation test, Honolulu Oil Corp.'s 25-P, Buena Vista Hills, record deep test, swabbed muddy water and scum of oil several days with packer 5678 ft. Plugged from 14,622 to 11,093 ft, blank liner set 5770-5898 ft, open hole 5905-6560 and 6900-7550 ft; 2880 ft gassy mud first test. Testing upper measures to be continued.

Continental Oil Co.'s KCL-C-2, deep test Sec. 35-27-24, Shafter area, tested wet 12,810-25 ft, to recement, bottomed 12,934 ft.

Kings County: Universal-Temblor Oil Co.'s Bunting 1, deep test Kettleman Hills Middle Dome area, NE 25-23-18, taken over by Mid-Kettleman Oil Co. to test zones 7000-7200 ft. Former operators drilled to 9138 ft, and well was plugged to 7815 ft.

Rocky Mountain Area

Southwestern Wyoming Gains New 2730-Foot Gas Field

Southwestern Wyoming had a new gas discovery, while a Montana wildcat indicated a new oil field. A well on a once abandoned lease in Kevin-Sunburst field made the largest completion in 10 years in that field.

Canyon Creek: West States Oil Co. (formerly Italo Petroleum Corp.) completed Humphrey-Unit 1, NW SE SE 10-12n-101w, wildcat Canyon Creek structure, Sweetwater County, Wyoming, for 727,000 ft of gas; 7-in casing set 2688 ft on sand in Wasatch, plugged back to 2730 ft from bottom 2900 ft.

Haystack Butte: Electric log showed oil sand in Ellis 2870-95 ft in Montana-Dakota Utilities Co.'s Oswood 1, C NE SW 18-35n-4e, Haystack Butte structure, Liberty County, Montana. Drilling plug after setting 5½-in 2858 ft, hole bottomed 2921 ft. Test previously showed commercial gas sand above Kootenai, topped 2444 ft.

Kevin-Sunburst: A. E. Crumley's Fryberger 22, NWc NW SE 24-35n-3w, 70 bbls hour fissure in Madison lime, sand 1563-1569 ft, hole bottomed 1582 ft.

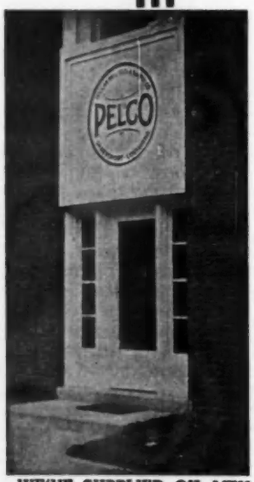
Lost Soldier: Following completion of 1200-bbl daily well in Tensleep sand, Sinclair-Wyoming Oil Company offsetting to north with ⅛-mile extension to deep sand limits, building derrick for Hughes 8, SWc 2-26n-90w, Lost Soldier field, Sweetwater County, Wyoming.

LUTHER H. PROCTOR, recent graduate petroleum engineer of the University of Oklahoma, has joined Magnolia Petroleum Company's engineering staff for duty in the West Ranch field, Southwest Texas.

LELAND FIKES, who has part interest producing properties in West Texas, Royall R. Watkins and Carl Mays have organized the Leroya Oil Company with headquarters at Dallas.

National Priority Anthem

It makes us very unhappy to have old friends offer us orders we can't fill. The customer has been top man around this establishment for more than 33 years. It will brighten the picture in some cases if customers will remember to give us a government contract number or a priority rating. Specifying acceptable substitutes also helps, and it is good strategy to place ORDERS instead of INQUIRIES, because too often stuff is sold before a quotation can be issued and accepted. We are sorry thus to add our discord to the tuneless dirge of the National Priority Chorus, but it seems necessary.



WE'VE SUPPLIED OIL MEN IN OUR AREA FOR 33 YEARS

PELICAN WELL TOOL & SUPPLY CO.

SHREVEPORT LOUISIANA

PELCO

Houston
Berwick
Houma
New Iberia
Magnolia

UNITED STATES WELL COMPLETIONS

Arkansas

Columbia County (Magnolia)—

Company, Well and Location	Init. Prod. Bbls.	Depth
Zach Brooks, Booth 1, 13-17-20	*	7574

California

Fresno County (Cantua Creek)—

Company, Well and Location	Init. Prod. Bbls.	Depth
Seaboard Oil Corp, Hagood 2	*	4589

Kern County (Devils Den)—

Company, Well and Location	Init. Prod. Bbls.	Depth
Miesse & McCabe, Jacquelyn 1	15	451

Kern County (Fruitvale)—

Company, Well and Location	Init. Prod. Bbls.	Depth
Corpus Christi Oil Co., Harrison 1	62	4017

Kern County (Greeley)—

Company, Well and Location	Init. Prod. Bbls.	Depth
Standard, KCL 12-15	2760	11510

Kern County (Kern River)—

Company, Well and Location	Init. Prod. Bbls.	Depth
East Puente Oil Co., No. 2	18	936

Kern County (Lost Hills)—

Company, Well and Location	Init. Prod. Bbls.	Depth
Tide Water, Islais 46	*	6545

Kern County (Mount Poso)—

Company, Well and Location	Init. Prod. Bbls.	Depth
Ring Oil Co., Bohn 7	400	1678

Kern County (Richgrove)—

Company, Well and Location	Init. Prod. Bbls.	Depth
Texas, G & L 77-1	*	3537

Kern County (Rio Bravo)—

Company, Well and Location	Init. Prod. Bbls.	Depth
Superior, Pasadena Realty 5	1518	11470

Kern County (Round Mountain)—

Company, Well and Location	Init. Prod. Bbls.	Depth
Shell, Olcese 4-1	*	2015

Los Angeles County (Del Valle)—

Company, Well and Location	Init. Prod. Bbls.	Depth
R. E. Havenstrite, Lincoln 6	1600	6185

Los Angeles County (Dominguez)—

Company, Well and Location	Init. Prod. Bbls.	Depth
Union, Austin 15	105	7190

Los Angeles County (Long Beach)—

Company, Well and Location	Init. Prod. Bbls.	Depth
Hilldon Oil Co., Amebco 1	250	5545

Los Angeles County (Newhall-Potrero)—

Company, Well and Location	Init. Prod. Bbls.	Depth
Barnsdall, RSF 21	1400	7361

Los Angeles County (Wilmington)—

Company, Well and Location	Init. Prod. Bbls.	Depth
Herley-Kelley, Coastline 4	150	3710
Union Pacific, UP 191	No Est	3515
UP 194	1159	2866
UP 198	1156	3560
UP E-35	598	4029
E-10	187	3774

Santa Barbara County (Santa Maria Valley)

Company, Well and Location	Init. Prod. Bbls.	Depth
Pacific Western, Hobbs 14	1000	4552

Ventura County (Rincon)—

Company, Well and Location	Init. Prod. Bbls.	Depth
CCMO Co., Hobson c-9	132	9337

Ventura County (Ventura Avenue)—

Company, Well and Location	Init. Prod. Bbls.	Depth
Lloyd Corp., No. 8	450	11157
Tide Water, Lloyd 80	158	6115

*Failures; †Junked; ¶Million cu. ft. gas.

Colorado

Rio Blanco County (Rangely)—

Company, Well and Location	Init. Prod. Bbls.	Depth
California Oil Group, Ltd., McLaughlin 2, nw sw 33-2n-102w	75	562

Routt County (Trull)—

Company, Well and Location	Init. Prod. Bbls.	Depth
Craig & Moore, Irwin 1-X, c sw ne 33-7n-85w	*	3018

Illinois

Bond County—

Company, Well and Location	Init. Prod. Bbls.	Depth
Woosley, Sapp 1, se ne sw 25-5n-4w (pb 550)	5	650

Clark County—

Company, Well and Location	Init. Prod. Bbls.	Depth
Henry Lane, Lane 7, nw ne nw 18-10n-14w	2	564
Verlin Pinnell, Tyler 2, se se nw 23-12n-14w	*	1514

Clinton County—

Company, Well and Location	Init. Prod. Bbls.	Depth
Hughes Pet., Hohman 2, se nw se se 10-2n-1w	*	1460

Edwards County—

Company, Well and Location	Init. Prod. Bbls.	Depth
Superior, Kiley 5, c w½ nw se 7-2s-11e	1000	3159

Effingham County—

Company, Well and Location	Init. Prod. Bbls.	Depth
K. Benson, Community 1, nw nw ne 22-6n-5e	225	2506
Jones et al, Martin 1, s½ n½ nw 27-6n-5e	240	2321

Fayette County—

Company, Well and Location	Init. Prod. Bbls.	Depth
Texas, Maxwell 5, ne se sw 19-6n-3e	*	1615
Carter Oil, Raymond 6-D, c w½ se ne 29-8n-3e	2000	3042
Buzzard 4, sw se se 34-9n-3e	144	1534
Buzzard 1, sw nw sw 35-9n-3e	48	1532
Wills-Gordon 2, sw nw nw 36-9n-3e	45	1542
Wills-Gordon 3, se sw nw 36-9n-3e	20	1555
Doty 3, se ne ne 12-8n-3e	72	1547
Wright 13-D, c e½ sw ne 21-8n-3e	200	3166
Durbin-Harper 2, se sw se 23-8n-3e	*	1639
Whisenant & Trenchard, Lilly 27-D, s½ sw se 16-8n-3e	200	3164

Franklin County—

Company, Well and Location	Init. Prod. Bbls.	Depth
W. C. McBride, Chapman 3, nw nw se 23-6s-2e	10	2098
Shell, McKemie 4, s½ ne se se 24-6s-2e	128	2163
Adkins, Chenault 1, ne ne se 26-6s-2e	160	2145
McKemie 3, se ne ne 25-6s-2e	147	2166
Lager 3, ne sw ne ne 35-6s-2e	432	2161
Manley, Lager 3, se ne se 26-6s-2e	158	2147

Hamilton County—

Company, Well and Location	Init. Prod. Bbls.	Depth
Kingwood, Dodd 5, sw se nw 6-6s-7e	468	3102
Pure, Maybury 2, se sw se 7-6s-7e	13	3045
A. Ritsheson et al, Shell, ne sw ne 7-6s-7e	556	2995

Jasper County—

Company, Well and Location	Init. Prod. Bbls.	Depth
Pure, Bolander 3, cw½ se ne 4-5n-10e	9	2835
Beneflel 1, cn½ se ne 8-5n-10e	482	2825
Long 1, c ne ne 8-6n-10e	185	2800
May 1, se nw ne 8-6n-10e	738	2820
Eckl Consol. 2, nw se ne 8-6n-10e	749	2810
Texas, Gregorie 2, nw ne ne 8-6n-10e	960	2804

Jefferson County—

Company, Well and Location	Init. Prod. Bbls.	Depth
Kingwood, 1st Nat. Bk. Woodlawn 2, ne ne sw 35-2s-1e	331	1990
E. N. Self, Zinke 1, ne nw sw 35-2s-1e	460	1991
Texas, Eubanks 1, sw nw se 35-2s-1e	692	1982

Lawrence County—

Company, Well and Location	Init. Prod. Bbls.	Depth
W. D. Anderson, Stockman Hrs. 1, nw sw sw 7-2n-12w	*	2442
Leighty, Spidel 1, w½ nw sw ne 26-2n-12w	31	1405

Richland County—

Company, Well and Location	Init. Prod. Bbls.	Depth
Pure, Anna Noe 1, ce½ nw se 6-3n-9e	*	3075

St. Clair County—

Company, Well and Location	Init. Prod. Bbls.	Depth
R. R. Laveridge, Gaskill 1, sw nw nw 34-1n-10w	250	700

Wabash County—

Company, Well and Location	Init. Prod. Bbls.	Depth
Joe Young, Price 1-A, nw nw nw 1-1n-12w	20	1690
Price 1-A, ne sw ne sw	*	1639
Adams Corner Oil Co., Wright 2, ne se sw 9-1n-12w	*	2025
White & Wichwire, Ickes 1, se sw nw 14-1n-12w	*	1773
Price 3, w½ se se nw 14-1n-12w	24	1636
L. E. Kennedy et al, Carson 1, sw sw sw 16-1s-12w	220	1988
Couch 1, s½ s½ sw 16-1s-12w	150	2000
H. G. Aspin, Poole 1, sw nw nw sw 21-1s-12w	125	2423
Hays Drl., Cotner 1, ne se nw nw 21-1s-12w	165	2335
Lavender & Hayes, Munday 1, cw½ se 21-1s-12w	175	2000

Washington County—

Company, Well and Location	Init. Prod. Bbls.	Depth
Gulf, Maschoff 4, sw se sw 10-1s-1w	116	1529

[*Continued on next page*]

Summary of Drilling Operations in the United States, Week Ended August 30, 1941

	WELLS COMPLETED								*PERMITS FOR NEW WELLS				
	Total for Week	New Wells Drilled for Oil and Gas: Oil Wells	Gas Wells	Failures	†Miscellaneous	Initial Production	Total 1941	Total this Date 1940	This Week	Total this Month	Total 1941	Total this Date 1940	Year Total 1940
Alabama	....	....	....	....	....	....	1	4	....	....	....	....	....
Arkansas	1	....	....	1	....	....	110	125	5	18	123	100	153
California	24	20	....	4	....	13,118	794	769	19	88	768	717	1,042
Colorado	2	1	....	1	....	75	13	5	....	....	....	....	....
Florida	....	....	....	....	....	....	....	1	....	....	....	....	....
Georgia	....	....	....	....	....	....	1	....	....	....	....	....	....
Illinois	75	59	....	16	....	17,953	2,444	2,684	118	451	3,112	3,024	4,532
Indiana	12	5	1	6	....	314	362	304	11	26	120‡	....	....
Iowa	....	....	....	....	....	....	5	....	....	....	....	....	....
Kansas	59	44	4	11	....	48,096	1,496	1,326	49	204	1,553	1,369	2,048
Kentucky	7	3	....	4	....	424	201	224	11	25	72‡	....	....
Louisiana	30	21	....	9	....	3,840	945	1,135	32	147	1,170	1,128	1,658
Michigan	19	5	1	13	....	9,550	537	834	31	86	589	764	1,093
Mississippi	3	2	....	1	....	1,064	12)	129	....	....	....	....	....
*Missouri	....	....	....	....	....	....	36	13	....	....	9	4	26
Montana	10	2	4	4	....	182	139	118	....	....	....	....	....
*Nebraska	....	....	....	....	....	....	59	8	5	15	71	8	69
New Mexico	7	6	....	1	....	1,248	242	470	12	34	283	426	559
New York	25	18	....	....	7	142	608	703	....	....	....	....	....
Ohio	48	12	21	15	....	34	1,109	624	....	....	....	....	....
Oklahoma	59	43	2	14	....	15,055	1,435	1,463	41	208	1,486	1,245	1,888
Pennsylvania	65	48	7	2	8	75	2,448	2,533	....	....	....	....	....
South Dakota	....	....	....	....	....	....	....	1	....	....	....	....	....
Tennessee	....	....	....	....	....	....	7	8	....	....	....	....	....
Texas	222	164	8	50	....	85,877	6,791	6,997	510	989	8,148	7,768	11,170
Utah	1	....	....	1	....	....	2	2	....	....	....	....	....
West Virginia	21	1	15	5	....	2	451	372	....	....	163	532	782
Wyoming	4	3	....	1	....	2,910	90	102	....	....	....	1	1
Total this week	694	457	63	159	15	199,959	20,446	20,954	844	2,291	17,667	17,086	25,021
Total last week	708	462	59	162	25	178,131	19,752	20,367	589	1,447	16,823	16,691	25,021
Total this year	20,446	12,734	1,530	4,497	1,685	5,751,362	.....	.....	.....	....	.....	.....	.....

* This tabulation includes those states were weekly data are available; figures for Missouri date from August 10, 1940; Nebraska from August 3, 1940.
‡ No data available before June 14, 1941.
† Includes old wells deepened, water-intake, gas input, and salt water disposal wells.

United States Well Completions—*Continued*

ILLINOIS—Continued

Wayne County—
Robinson & Continental, Puckett 1, ce½ se se 17-2s-8e ..... • 3410
Watkins Drl., Kincaid 1, cw½ se sw 36-1s-7e 703 3338
J. W. Sanders, Hasselton 2, nw se sw sw 29-2n-8e 100 3051
United Prod. Co., Matchett 2, cn½ sw se 27-1n-6e 672 3086
Weiser Oil, Hilliard 1, s½ se sw 27-1n-6e 2200 3085
Wiser Oil, Matchett c s½ se se 27-1n-6e 1700 3096
Pure, Carson Consol. 1, c e½ ne ne 11-1n-7e 303 3068
Harrington 1, c e½ nw sw 12-1n-7e 59 3095
White County—
Longhorn, Helm 15, sw sw nw 23-3s-14w 200 2181
Mabee Drl., Smith 4, sw se sw 4-4s-14w 54 2854
Sun & J. C. Ellis, Jacobs 17, nw se nw 28-4s-14w 110 2859
Sun, Greathouse 33, nw ne sw 33-4s-14w 303 2598
Bert Fields et al, Karch 1, sw se se 13-6s-10e 133 2880
1st Nat. Pet. Trust, Karch 1, nw sw ne 24-6s-10e 40 2887
Karch 2-B, sw sw ne 24-6s-10e.. 310 2036
Skelly Oil, Karch 3, se ne nw 24-6s-10e 217 2018
Sinclair-Wyo., Barnes 1, nw ne sw 7-6s-11e ..... • 3049
Arrow-Lambert, Welsh 1, ne sw sw 11-7s-8e ..... • 3007
Cronin-Anderson, Mitchell 1, ne sw nw 11-7s-8e 120 2930
Fisher Oil & Arrow, Ellis 6, se se sw 11-7s-8e 500 2168

OIL WELLS DEEPENED

Clinton County—
S. W. McGee et al, se nw ne ne 13-1n-1w (otd 2909) ..... • 2909
Marion County—
Texas, Young 24, sw se ne 20-2n-2e (otd 3565) 144 4635
Tex Harvey, Kagy 7-B, sw se se 33-3n-2e (otd 3565) ..... • 3742
Montgomery County—
R. J. McFarland, Wagoner 1, se se ne ne 29-11n-5w (otd 635) ..... • 1155
White County—
J. H. Jones, Saunders 1, ne nw se 12-4s-10e (otd 1825) ..... • 3235

Indiana

Daviess County—
R. D. Brown, Inc., Birch 1, c s½ se nw 21-2n-6w ..... • 874
Dubois County—
Indiana Util. Corp., Miles 1, ne ne sw 6-3s-4e ..... ¶0.11 876
Gibson County—
Hall Edwards, Rec., Maier 25, nw nw nw 13-3s-14w 100 2884
Continental Oil, Keck 28, nw nw sw 26-3s-14w 110 2591
W. C. McBride, Blood 5, ne sw se 28-3s-14w 36 2894
Lewis Prod., Dunn 7, se ne nw 19-3s-13w 60 2100
Greene County—
Ohio Oil, Wells 1, c n½ nw se 2-7n-4w ..... • 1410
Monroe County—
Deskins et al, Cowling 1, sw sw nw 34-7n-1e ..... • 1830
Posey County—
Cherry et al, Gray, Trs. sw sw sw 35-3s-14w ..... • 3003
Joe Bander, Allyn 1, e½ sw se ne 24-6s-13w ..... • 379
Paul Rossi et al, Sanders 1, ne se nw 26-6s-13w ..... • 2458
R. D. Martin et al, Wolf & Harlem 1, se se sw 22-7s-15w (pb 2810) 8 2967

Kentucky

Butler County—
Cumberland Pet. Co., Brown Hrs. 7, 9-H-32 ..... 14 405
Daviess County—
C. E. Daugherty, Heulette 6, 16-N-31 ..... 10 714
Henderson County—
Schneider & Gwin, Overfield 3, 25-O-25 ..... • 733
McLean County—
J. C. Ellis, Stevens Hrs. 7, 6-L-29 400 1633
Miller et al, Tanner 1, 24-M-29.... • 1862
Ohio County—
Porter Evans, Neil 1, 2-N-34..... • 429
Webster County—
O. D. Vickers, Cullen 7, 13-N-24... • 402

Kansas

Barton County—
Shell, Oeser 3, sw nw nw 17-16-11w (pb 3303) 1296 3306
C. E. Ash et al, Schartz "B" 2, c e½ se sw 7-20-11w 3000 3318
Texas, Koch 3, c w½ nw sw 7-20-11w 556 3334
D. R. Buchanan et al, Langfield "A" 3, c e½ nw sw 14-20-11w.. 2456 3290
Butler County—
Cities Service, Wilson 199, swc ne 8-25-5e 95 2012
Empire 18, se nw ne 17-26-5e... 11 1694
Empire 19, nw se ne 17-26-5e... 10 1679
Varner 34, ne sw ne 17-28-4e... 89 1995
Cowley County—
Aylward, Hanlen 3, ne nw ne 35-30-4e 35 2961
Ryan, Kennedy 4, nw se sw 12-30e-5e 871 2830
McKnab, Bruington 1, c n½ nw ne 17-31-5e ..... • 3363
Zephyr et al, Moon 8, swc 16-32-5e. 1260 3080
Sinclair Prairie, Shurtz 1, sw nw ne 29-34-3e 389 3391
Ellis County—
Dickey, Carmichael "C" 6, c w½ ne nw 17-11-17w 3000 3374
Cities Service, Collahan "B" 7, sw nw sw 25-11-17w 3000 3516
Phillips, Ressler 1, nw se 32-11-17w 276 3475
Shell, Deane 2, nw sw ne ne 14-11-18w 3000 3376
Skelly, Koblitz 2, c e½ ne ne 22-12-18w 252 3697
Continental et al, Fuller 8, sw nw se 28-17-8w 3000 3220
Ellsworth County—
Atlantic, Frevert 1, c e½ nw nw 14-17-10w ..... • 3304
Greenwood County—
Weideman, Lewis "A" 9, se ne sw 25-27-8e 20 2426
Page, Cook et al, Hebb 2, c w½ se ne 8-28-11e 15 1220
Douglas County—
Meinholdt & Edwards, Stanley 1, nw ne nw 3-14-21e ..... • 2503
Jefferson County—
Anderson et al, Wisdom 1, c sw sw 29-9-20e ..... ¶15.2 1453
McLaughlin, Brosa 1, c ne se 32-9-20e ..... ¶1.07 1575
Taylor & Shaffer, Sherman 1, c ne ne 6-10-20e ..... ¶13.0 1518
Leavenworth County—
Epperson et al, Steenstry 1, sw se nw 3-10-20e 40 1474
Marion County—
Hauser et al, Hauser 4, c e½ sw ne 33-17-4e ..... • 2487
Pawnee County—
Hall-Jordan, Smith 2, c n½ sw se 12-20-16w 3000 3827
Mid-Continent, Bixby 2, nw ne nw 24-20-16w 1212 3831
Phillips County—
Tom H. Allan et al, Friebus 1, c se nw 36-2-19w ..... • 3461
Pratt County—
Skelly, Moore 6, c w½ sw sw 25-27-11w 367 3507
Beardmore, Kemp 4, c n½ nw nw 12-28-11w 3000 4267
Rice County—
Derby et al, Link 2, c n½ nw se 19-19-9w (pb 3280) 468 3285
Ingling & Parker, Markee 1, c ne sw 1-20-9w ..... • 3008
Vickers, Bayer "A" 2, c w½ se nw 20-20-10w 469 3314
Bayer "B" 3, c w½ nw nw 20-20-10w 786 3314
Mid-Plains, Thompson 2, sw se ne 11-21-7w 500 3391
K. A. Holland, Pallister 1, c n½ se sw 12-21-7w 240 3430
Rooks County—
Krueger, Tatkenhorst "B" 4, c s½ sw se 10-9-16w 803 3275
Cities Service, Erway 1, sec 2-10-16w (pb 3168) 125 3495
Russell County—
John Barwick et al, Shrader 1, c s½ se se 21-12-14w ..... • 3291
Central, Harbaugh 1, nwc 21-14-12w • 3289
Steinle 1, c e½ nw ne 29-15-12w. 1099 3323
Jones & Shelburne, Reln 3, c s½ sw sw 27-14-13w 876 2881
Texas, Boxberger "B" 2, c w½ sw ne 22-14-14w 703 3103
Cities Service, Ebel "B" 4, c n½ sw se 24-14-14w (pb 3069)..... 756 3364
L. T. Machall, Kluesner "A" 1, nec nw 34-15-12w ..... • 3365
Carter, Detrich 13, swc 8-15-13w.. 1200 2978
Continental, Meharg 11, sw se ne 17-15-13w 69 3282
Phillips et al, Pauline 2, sw ne nw 15-15-14w 82 3229
Shell, Batt "A" 8, sw ne se 35-15-14w 3000 3342
Atlantic Sharp 1, c s½ se ne 4-21-13w 660 3412
Stafford County—
E. W. Hamilton et al, Ward 1, nec sw 15-23-13w ..... • 3830
Porter, Richardson 3, ne sw sw 10-24-11w 3000 3821
Stanolind et al, Tudor 3, c n½ sw nw 23-24-13w ..... • 4119
Stephens County—
Northern Nat. Gas. Co., Curry 1, nwc 2-33-37w ..... ¶16.9 2840

OLD WELLS DEEPENED

Russell County—
Julian Oil Co., Lewis 1, swc ne 28-14-12w (otd 2329) (pb 2325).... 10 3191
Stafford County—
Stanolind, Hartnett 6, se ne nw 13-24-11w (otd 3783) 3000 3811

South Louisiana

Acadia Parish (Jennings)—
Imperial Oil Co., Jennings-Heywood 3 ..... 30 1560
Allen Parish (Wildcat)—
F. K. Campbell, Jr., Bowles 1..... • 7795
Avoyelles Parish (Wildcat)—
Joe Humphreys, Tr., Frazee 1.... • 6390
Calcasieu Parish (Vinton)—
M. L. Richardson, Vincent Hrs. 6. 175 3450
Evangeline Parish (Ville Platte)—
Continental, Bercier-Deville 2..... 275 10216
Iberville Parish (Bayou Blue)—
Markley & Crosby, Baist Cooperage & Lbr. Co. 8..... 15 3310
Union Sulphur, Schwing 2..... 238 7147
Iberville Parish (St. Gabriel)—
Shell, Gueymard 3..... 292 8622
Jefferson Parish (Barataria)—
California Co., Fleming Plant C-14. 240 7653
Geo. B. Conover, Unit A-12-B 1... • 9812
Jefferson Davis Parish (Iowa)—
Barnsdall, Fontenot 7..... • 8280
Jefferson Davis Parish (Welsh)—
Union Sulphur, Bourgeois 3....¶1.1 & 4 6556
Jefferson Davis Parish (Woodlawn)—
Union Sulphur, Miller 6.....¶1.4 & 20 8036
Trimble 5 ..... 173 8051
La Fourche Parish (Golden Meadow)—
Texas Co., LL&E-Golden Meadow.. 284 8050
La Fourche Parish (Leeville)—
Texas Co., LL&E-Leeville 83..... • 7127
Plaquemines Parish (Bastian Bay)—
Phillips Pet., LL&E-Fee 1..... 324 10710
Plaquemines Parish (Garden Island Bay)—
Texas Co., State 52..... 259 7713
State 53 ..... 183 6702
Rapides Parish (Wildcat)—
Marret al, Lee Lbr. Co. 1 (otd 5010) ..... • 4234
St. Charles Parish (Paradis)—
Texas Co., LL&E 12..... 493 10400
St. Martin Parish (Anse La Butte)—
Crosby Dr. Co., Republic 4..... 147 6479
St. Martin Parish (Plumb Bob)—
Texas Co., St. Martin Land Co. 17. 161 9562
St. Martin Parish (W. Lake Verret)—
Shell, Norman Breaux A-5..... 81 2365
Terrebonne Parish (Dog Lake)—
Texas Co., LL&E 16..... 184 8065
Terrebonne Parish (Gibson)—
Shell, Kountz 6..... • 10900
Realty Operators B-7..... 225 10534
West Baton Rouge Parish (Port Allen)—
Amerada, Wilberts 3..... • 9921

North Louisiana

Claiborne Parish (Homer)—
Carter Oil, Lowenberg 41, 24-21n-8w 37 1434
M. E. Florence, Shaw 1, 30-21n-7w • 2170

Mississippi

Leake County (Wildcat)—
Sinclair-Wyoming Oil, Community Pearl River 1, 28-9n-6e..... • 9009
Yazoo County (Tinsley Dome)—
W. G. Ray Dr. Co., Walker 1, 2-9n-3w 632 5042
Union Prod. Co., Williams 1, 35-10n-3w 432 4788

Montana

Glacier County (Cut Bank)—
Santa Rita O. & G. Co., Govt. 2, lot 3, 31-33n-5w..... • 2890
Jacobson 2, se nw 23-37n-5w.... 150 2611
Phillips County (Bowdoin)—
Montana-Dakota Util. Co., Keystone 664, c sw sw 22-33n-33e.. ¶0.2 1088
Rankin 665, c sw se 23-32n-33e.. ¶0.5 1015
Occidental 653, lot 3, 2-32n-33e.. ¶0.5 1125
Siewing 654, c nw se 12-32n-32e. ¶0.75 910
Toole County (Kevin)—
Superior Pet. Corp., Govt. 3, se se nw 24-35n-3w..... 32 1616
Bosworth & Shubert, Lukenbill 1, c sw ne 11-36n-2w..... • 2011
A. W. Morton, Burwash 1, nw ne 15-34n-1w ..... • 235
Lund & Engleking, State 1, ne ne ne 34-35n-4w ..... • 2066

United States Well Completions—*Continued*

Michigan

Company, Well and Location	Init. Prod. Bbls.	Depth
Allegan County—		
R. B. Tamblyn, Antonson 1, ne se se 24-1n-16w	15	1098
Clapsaddle, Schmtz 2, ne nw ne 35-1n-14w	*	1252
C. G. Stark, Thomas 1, nw nw nw 29-1n-15w	*	1205
W. S. Cook, Ruehl 1, nw ne se 35-3n-13w	*	1615
H. R. Fothergil, Green 1, nw se sw 11-4n-13w	20	1610
Arenac County—		
W. C. Mee, Seignious B3, sw sw se 3-19n-3e	*	2610
Basin & Rayburn, Mutch 1, nw nw se 17-19n-4e	*	3010
Bay County—		
K. Bagwell, Eigner 1, nw nw ne 3-13n-6e	*	2141
Cheboygan County—		
Lenoran Pet. Co., Commeau 1, se se 23-35n-1e	*	1150
Clare County—		
Pure Oil, Egts B1, c e nw sw 29-20n-6w	*	3890
Isabella County—		
Burruss & Quinlan, Hein 1, c nw 18-14n-5w	¶1.0	1365
L. & S. Dr. Co., Houton 1, sw se ne 20-14n-5w	*	1350
Montcalm County—		
Daily Crude, Weatherby 4, se se se 20-12n-9w	15	3340
Montmorency County—		
A. S. Hoyt, Rea 1, nw sw nw 24-30n-3e	*	1950
Muskegon County—		
H. C. Nelson, Slocum 1, c ne se 33-12n-17w	*	1000
Osceola County—		
Weber Oil Co., Ritter 1, c n½ ne sw 30-18n-10w	1500	3590
Pure Oil, Lomp 2, c s½ nw ne 31-18n-10w	8000	3615
Ottawa County—		
Associated Pet. Co.'s Van Zoeren 1, ne nw se 14-5n-14w	*	1600
Van Buren County—		
H. C. William, Klapp 1, se ne sw 11-1s-14w	*	1326

New York

Company, Well and Location	Init. Prod. Bbls.	Depth
Allegany County—		
Bradley Prod. Corp., Bascom farm, Alma	8	1376
B. & B. Oil Co., Curtis farm, Bolivar	8	1379
J. A. Bucher, Hamsher farm, Bolivar	7	1358
E. G. Williams et al, Meldrum farm, Bolivar	9	1376
Messer Oil Corp., Shaner farm, Bolivar	10	1470
Central Oil Co., Holtum farm, Scio	9	1118
Ebenezer Oil Co., Mecklin farm, Wirt	8	1264
Wm. O. Taylor Est., Reid farm, Alma	8	1386
L. H. Richardson et al, Scott farm, Alma	9	1539
Bradley Prod. Corp., Monder farm, Alma	7	1375
Brown & McEnroe, Kemp farm, Alma	8	1326
Albert Oil Co., Witter Farm, Scio	9	1067
McEbenwood Oil Co., Lynch farm, Andover	14	1348
Wood Oil Co., Richmond farm, Willing	5	1163
Scio O. & G. Co., Fuller farm, Amity	5	669
Carl Oil Co., Harris farm, Amity	5	754
Gray Oil Co., Smith farm, Genesee	5	1335
Sloan & Zook Co., Schram farm, Bolivar	8	1378
WATER INTAKE WELLS		
Allegany County—		
R. J. Dermitt, Richardson farm, Bolivar		1140
V. V. V. Franchot, Murphy farm, Bolivar		1367
Allen & Bartoo, Pire farm, Bolivar		1065
Brothers Oil Co., Crandall farm, Bolivar		1376
C. H. Christman, Underwood farm, Scio		1279
Albert Oil Co., Witter farm, Alma		1230
Marsh Oil Co., Fay farm, Bolivar		1371
Cousins Oil Co., Roeske farm, Wellsville		1332
H. W. Patterson et al, Stebbins farm, Scio		759
Crowley Oil Co., Peet farm, Bolivar		1435

New Mexico

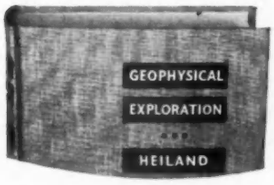
Company, Well and Location	Init. Prod. Bbls.	Depth
Eddy County—		
Etz Oil Co., State 6, swc ne 16-17s-30e	325	2095
C. T. Hegwar et al, Root 1, c nw ne 12-17s-29e	198	2632
R. W. Fair et al, Falkenberg 1, se sw nw 24-18s-26e	*	2255
Lea County (West Eunice)—		
Wilson Oil Co., State-Shell 13, c se ne 13-21s-34e	125	3765
Lea County (Maljamar)—		
W. J. Rutledge et al, State-Texaco 3-0, c sw nw 16-17s-32e	200	3690
Lea County (Monument)—		
B. H. Nolen et al, Laughlin-Humble 1, c n½ se ne 4-20s-37e	160	3891
Williams 1, swc 34-19s-37e	240	3890

Ohio

Company, Well and Location	Init. Prod. Bbls.	Depth
Allen County—		
Carmen Oil, Stone 6	8	1423
Ashland County—		
Ohio Fuel Oil, Pettit 1	*	2912
Perry Oil Co., Devault 1	3	729
Athens County—		
Carpenter Bros., Fee 3	1	170
Fee 4	½	152
C. W. Nuzum, Warren 1	¶0.08	1525
Mathews Oil, Featherstone 1	¶0.06	881
Carpenter & Glazier, Kuhns Hrs. 1	½	190
Kuhns Hrs. 2	*	205
Kuhns Hrs. 3	1	175
Auglaize County—		
N. E. Master, Gashner 1	*	1348
Guernsey County—		
George Jewell, Bates 1	¶0.1	1625
Harrison County—		
Ohio Oil Co., Blackwell 1	*	6255
Hocking County—		
Ohio Fuel, Sunday Creek Coal Co. 199	¶0.52	1139
Holmes County—		
Bell Brs., Armor 1	¶0.02	917
Knox County—		
A. Willey, Staats 1	¶0.79	2958
Ohio Fuel, Whitney 2	¶1.76	2956

[*Continued on next page*]

The Most Complete and Versatile Geophysics Book Ever Published!



The Only Book That

Gives the fundamentals of geophysics, in non-technical language, for use by geologists, oil and mining engineers, and petroleum geologists (Part 1).

Presents the most complete, thorough and scientific treatment of all aspects of geophysics ever achieved (Part 2).

Broad Divisions of the Book Methods of Geophysical Exploration—Measurement Procedures—Geophysical Methods in Mining—Applications of Geophysics in Engineering—Gravitation Methods—Magnetic Methods—Seismic Methods—Electrical Methods—Geophysical Well Testing—Miscellaneous Geophysical Methods.

***Over 500 illustrations—1013 pages*—$10.00**

"It fulfills exactly my aim in ordering the book, namely, to have at hand in a single volume the basic theory and practice of geophysical prospecting in its various forms."
Reverend James Kline, St. Edward's University

Send orders to

THE GULF PUBLISHING COMPANY
P. O. Drawer 2608 Houston, Texas

The Stripper That conditions your wire line

Automatic
Compact
Safe
Refillable

For service on producing wells where gas and high gravity oil are encountered, Patterson-Ballagh Style B Wire Line Wiper is highly recommended. This style comprises a steel housing and easily replaceable one-piece rubber refill. The housing is neatly hinged. The rubber is spirally-wound and wipes the line cleanly. Equipped with hold-down chains and safety release.

See Composite Catalog

PATTERSON-BALLAGH
WIRE LINE WIPER
PATTERSON-BALLAGH CORPORATION
Los Angeles Houston New York City

United States Well Completions—*Continued*

OHIO—Continued

Company, Well and Location	Init. Prod. Bbls.	Depth
Licking County—		
Ohio Fuel, Holmes 2	¶0.18	2137
Penick et al, Warrington 1	•	2596
C. A. Davis, Weekly 2	¶0.35	2639
Loraine County—		
McMillen, Peoples Bank 1	•	2280
Ohio Fuel, Losoncy 1	•	2725
Medina County—		
Preston Oil, Johnson 1	•	300
Clapp L-6	5	514
Clapp R-6	5	527
Grigsby H-9	5	503
Meigs County—		
H. B. Walker Co., Snodgrass 1	¶0.85	1603
Dowie, Lynch 1	¶0.26	764
Ohio Fuel, Coen 2	¶1.25	861
Monroe County—		
Workman O. & G. Co., Johnston 1	¼	1700
Peters & Huntsman, Peters 2	¶0.05	2064
Morgan County—		
Williams Bros., Pierpont 1	•	1030
Muskingum County—		
Columbus Clay & Mineral Co., Harmon 1	¶0.02	4685
Ohio Fuel, Fee 4	•	4223
Noble County—		
Chaseville Oil Co., Kronebitter 3	2	1579
Barnesville Dev. Co., Eagon 1	•	1610
Perry County—		
Davis Gordon et al, Packer 1	•	2610
Gas Prod. Co., Williams 2	•	3300
Seneca County—		
P. F. Rockett, Rose 1	•	1485
Stark County—		
C. W. White, Werstler Est. 1	¶1.6	4572
Tuscarawas County—		
Brendel Prod. Co., Boy Scouts of Amer. 1	¶1.26	5112
J. A. Upham, Kinsey 1	¶0.56	5289
Vinton County—		
Kelch Bros., Sampson 1	¶0.03	1177
Washington County—		
Reno Oil, Webber 2	¶0.07	1883
William Depuy, Heldman 3	¶0.05 & ½	1803
Baker et al, Sims 1	¶0.3	1469
Anderson et al, Benson 6	•	1540
Wayne County—		
East Ohio, Kean 1	¶1.0	3000

Priority Form PD-73*

in stock and available for immediate shipment

*(i) Beginning September 1, 1941, no producer of steel shall make, and no person shall accept delivery of steel from a producer unless and until such person shall have filed with the producer at the time of placing his purchase order or contract, a statement on Form PD-73 . . . or in such other form as may from time to time be prescribed by the Division of Priorities, setting forth the purposes for which the material ordered will be used. In the case of orders or contracts placed prior to September 1, 1941, such statement shall be filed before October 15, 1941. (Title 32, National Defense; Chapter IX, Office of Production Management; Subchapter B, Priorities Division; Part 962, Steel; General Preference Order M-21 to conserve the Supply and Direct the Distribution of Steel.)

GULF PUBLISHING CO.

Stock Form Dept.

P. O. Box 2608 Houston, Texas

TELEPHONE HADLEY 3141

Oklahoma

Company, Well and Location	Init. Prod. Bbls.	Depth
Bryan County—		
Pure, Little (106) 8, ne nw sw 27-5s-7e	990	4917
Caddo County—		
Magnolia, Ginrick 6, se se ne nw 6-5n-9w (pb 3320)	34	3510
Ramsey, Davis 1-A, se sw ne ne 1-5n-10w	1160	3460
Carter County—		
Skelly, Drew 3, swc se 8-2s-2w	•	3768
F. W. Elliott, Wolf 1, nw nw ne se 22-2s-2w (pb 1082)	13	1224
Dixon & Lausen, Woodsworth 8, ne ne nw nw 20-4s-2w	459	2214
Gibson & Jennings, Harrell "A" 10, nw sw nw 20-4s-2w	554	2266
W. F. Turner, Stearns 9, sw sw se sw 21-4s-2w	11	2364
Creek County—		
Shell, Bunyard 2, se ne se 31-15n-7e	68	2864
Denny 2, sec nw 32-15n-7e	29	2806
Lewis, Fisher 1, nw ne se 32-15n-7e	116	2833
Josaline, Dunlop 17, se nw nw 27-16n-9e (pb 2125)	¶1.0	2911
Grady County—		
J. H. Graham, Cockran 1, swc se 27-3n-5w	18	1463
Hughes County—		
Potco Oil Corp., Morrison 1, nw se sw 13-9n-10e	1480	3761
Kiowa County—		
E. E. Spink, Fee 2, nec se 11-5n-17w	•	355
H. J. Sherman, Watkins "B" 3, ne se se 18-7n-17w	•	1281
Watkins "B" 4, nw se se 18-7n-17w	•	1503
Shell, Ratliff 6, nw ne sw ne 19-7n-17w	36	1137
Mathews-Thorpe-Lewis, Barzell 1, ne ne 33-7n-17w	•	1046
Logan County—		
Sunray et al, Donoghue 5, nw ne se 7-17n-1w	825	5437
Love County—		
Baldwin et al, Hill 1, nwc se 26-8s-2e	•	5510
Marshall County—		
Gill et al, Adams 2, sw se ne 6-8s-6e	44	538
Latimer County—		
LeFlore G. & E. Co., Golletts RO-43, c sw 12-6n-21e (pb 1853)	¶2.3	1873
Lincoln County—		
Wilcox, Furry 5, se nw ne 21-14n-6e	15	3120
T. A. Creekmore, Tipton 1, nwc sw 23-15n-5e	•	3505
Okfuskee County—		
C. W. Titus, Replogle 2, nw ne ne 26-11n-8e	100	3490
Foundation, Brown 2, sw nw ne 35-11n-8e	951	3423
Shell, Van Pelt 2, nec nw 35-11n-8e	650	3471
Phillips, Replogle 2, swc nw 26-12n-8e	175	3693
Wilcox, Nevy 1, sec nw 4-13n-7e	•	3580
Okmulgee County—		
Minshall & Lowery, Thompson 1, swc nw 33-16n-11e	75	2048
Osage County—		
N. M. Norris, 8-A, se ne nw 22-21n-12e	•	1308
Herman Madvine, 2, nw nwc sw 14-22n-10e (pb 1807)	10	1891
Magnolia, 5, ne nw nw 14-26n-6e	185	2906
Blackwell, 15, se nw sw 3-28n-11e	•	936
Pawnee County—		
Prunty, State 1, swc se 33-20n-5e	•	3593
Pontotoc County—		
Hughes-Thompson et al, Johnson 1, swc se 26-4n-5e	•	1610
Joe Josephson, McCurry 1, swc nw 15-4n-6e (pb 686)	24	2850
Barbara, Chapman 7, nec nw 36-5n-7e	3	1665
Pottawatomie County—		
Culver & Shepard, Waite "A" 2, sec nw 9-5n-5e	300	2636
Oils, Inc., Walker 2, se ne sw 9-5n-5e	350	2462
Atlantic, McCurry 4, se ne sw 6-6n-4e	200	4472
Eagle-Helmerich & Payne, School Land "C" 3, ne nw ne 16-7n-5e	250	4152
Hall-Jordan, Blaine 2, nwc 1-9n-3e	371	5230
Stanolind-Amerada, Bowling 1, nw sw nw 25-9n-4e (pb 4182)	320	4407
Wood et al, Billington "A" 1, nw sw ne 26-9n-4e	35	4480
E. L. Lippert, Rosebuch 1, ne se sw 34-10n-3e	•	5442
Jenkins, Washington 1-A, nw nw sw nw 19-11n-5e	•	4874
Seminole County—		
Big Chief, Harrah 1, nw sw sw 10-5n-5e	50	2633
Delaney, Coker 1, c ne sw 30-8n-7e	268	4313
Stanolind, Grisso "C" 1, nw se sw 15-9n-6e	10	2902
Stephens County—		
Magnolia, Dillard 25, nw nw se ne 2-2s-5w	25	700
OLD WELLS DEEPENED		
Carter County—		
Roy Kyle, Daugherty 3, nw se sw sw 17-4s-2w (otd 2158)	901	2240
A. L. Tucker, Shores 1, sw swc 17-4s-2w (otd 2039)	1006	2224
Shores 2, swc 17-4s-2w (otd 2064)	811	2224
Shores 3, se swc 17-14s-2w (otd 2074)	1360	2226
Walter Neustadt, Choate (20) 4, ne nwc 20-4s-2w (otd 2005)	603	2145
Oklahoma County—		
Anderson-Prichard, Proffitt 1, se ne sw se 15-12n-3w (otd 1025) (pb 4138)	158	4436
Creek County—		
Tide Water & Pure, Jackson 8, ne ne sw sw 2-17n-7e (otd 2582)	12	2645

Pennsylvania

Company, Well and Location	Init. Prod. Bbls.	Depth
Armstrong County—		
R. C. Galbraith et al, Rupp 1	¶0.09	3032
Humphries-Stone-McCall, Troutman 1	¶0.03	3392
Clarion County—		
Owens-Illinois Glass Co., Barnhart 1	¶0.04	2740
Fayette County—		
Victor Piscollomine, Zekel 1	•	1401
Greene County—		
Equitable Gas, Vandruff 1	¶0.28	3512
Indiana County—		
T. W. Phillips G. & O., Fesher 1	•	3472
Washington County—		
Union Gaso. & Oil, Craft 1	25	2881
Equitable Gas Co., Warren 1	¶0.25	1344
BRADFORD DISTRICT		
Storms & Westran, McCaffrey	1	...
Mix Creek Oil Co., Fee	1	...
Producers Bank & Tr. Co., Fee	3	...
Forest Oil Corp.	1	...
Forest Pet. Corp., 2 wells	2	...
Niagara Oil Corp., 5 wells	5	...
Bradford Transit Co., 31 wells	31	...
Esther Oil Co., Lamton	1	...
Smith, Newton Oil Co. et al, Kellogg-Monroe	1	...
T. H. Given, Bing 317-31-22-27	1	...
WATER INTAKE WELLS		
Mix Creek Oil Co., Fee	...	...
Forest Oil Corp., 2 wells	...	...
Forest Pet. Corp.	...	...
Niagara Oil Corp., 3 wells	...	...
Esther Oil Co., Lamton	...	...
MIDDLE DISTRICT		
Dempseytown Gas Co., Shriber	¶	...
Alum Rock Gas Co., Griswold	1	...
South Penn Oil Co., Smith & Grace	2	...
BUTLER-ARMSTRONG DISTRICT		
Miller & Smith, Clymer Hrs.	¶	...

East Texas

Company, Well and Location	Init. Prod. Bbls.	Depth
Kilgore Area—		
Shell, Bivins 22-A	1500	3636
Elder 15-B	1500	3606
Longview Area—		
Bristow-Wynn & Bailey, Moore 9	2000	3515
L. & G. Oil Co., Alexander 2	120	3578
Selby O&G Co., Snavely 18-D	1000	3558
Stanolind, Smith 15-B	2000	3505
Stuckey-Thrasher 22-B	1200	3576
Anderson County (Cayuga)—		
Carter-Gragg Oil Co., Goode 1	179	4011
Anderson County (Long Lake)—		
H. L. Hunt Oil Co., Broyles-Wolverton 5	87	5405
Franklin County (Wildcat)—		
W. B. Hinton et al, Hargrave 1	•	4843
Panola County (Bethany)—		
Mid-States Pet. Corp., Roquemore A-1, B. C. Jordan sur.	¶25.0	6984
Upsher County (Wildcat)—		
W. W. Bradley et al, Robinson 1	•	4632
Wood County (Hawkins)—		
Humble, J. M. Bryan 1 (65/100 ac)	260	4823
Christian Womens Missions 1-A (22.45-ac)	488	4683
Roger Lacy et al, Miller 1 (20-ac)	343	4776
Navarro Oil Co., Mayberry 2 (96-ac)	329	4774
Jack Williams et al, Price 1	478	4807
Wood County (Wildcat)—		
Bobby Manziel-Jack Dempsey, Holmes 1	•	5318
OLD WELL DEEPENED		
Wood County (Wildcat)—		
Roger Lacy et al (was Bill Urbanic), Snider 1 (otd 1750)	•	4900

United States Well Completions—*Continued*

North Texas

Company, Well and Location	Init. Prod. Bbls.	Depth
Archer County (Wildcats)—		
W. B. Hamilton et al, Cartwright 22 (pb 5164)	8	5211
Harman & West, Shawver 1	*	1601
Archer County (Hull-Silk Deep)—		
Helmerich-Payne & Mazda, Finley 8	488	4564
Sinclair Prairie, Jones 5	*	4650
Archer County (Hull-Silk)—		
King Oil Co.-Phillips Pet., Wilson 13-E	408	3881
Archer County (Scotland)—		
Shell, Coleman 2-C	1700	5208
Archer County—		
Bridwell Oil Co., Oil Inv. Co. 17-C	9	702
C. T. Hedges te al, Griffin 4-A	6	1306
W. T. Hutcheson Jr. et al, Wilson 10-A	6	611
Morgan & Turner, Carr 10	38	1421
Pet. Producers Co., King 6	*	1240
Shappell Oil Co., Bell 24	50	1012
Baylor County (Turbeville)—		
British-American O. P. Co., Turbeville 11	61	2529
Clay County (Wildcats)—		
Seth Cockrell et al, Henry & Estep 1	*	1280
Fain-McGaha Oil Corp., Bentley 1	*	1283
W. B. Hamilton et al, Wineinger 1	*	1310
Clay County (Jolly-Ross)—		
Continental et al, Ross 4	608	5493
Clay County—		
C. Y. Gorman et al Taylor 6	50	1132
Gorman & Christie, Taylor 6	*	1136
Harper & Knappenberger, Bilbrey 2	51	1171
Cooke County—		
Bridwell Oil Co., Flusche 11-B	18	767
Flusche 12-B	20	780
Burk Roy. Co., Wilson-Ware 1 (new pay) (pb 2086)	15	2224
Kewanee Oil Co., Timmins 17-B (pb 1420)	100	1630
Texas Co., Trubenbach 27	24	777
Jack County—		
Harper-Knappenberger et al, Loving 5	*	3606
Paul Steed et al, Dunlop 1 (new pay)	24	3261
Wichita County—		
Perry Browning et al, Simpson 4	80	1766
Simpson 6	75	1760
Warren 3	*	1728
Coppock & Coleman, Warren 14	87	1758
W. H. Hammon et al, Johnson 3	75	1305
Underwood Oil Co., Stine 7	60	1317
S. H. Walton et al, Coleman 24	3	628
Wichita County (K-M-A)—		
Geo. W. Cooper et al, Waggoner Bros. 59	†	4063
Hammon-Hanlon & Buchanan, Fassett-Tuttle 42	544	4013
Wichita County (K-M-A Ellenberger)—		
Deep Oil Dev. Co., Bradley 3-E	1032	4340
Panhandle Ref. Co., Reilly-Griffin 1-E	1224	4343
Shell & Phillips Pet. Co., Griffin 28-E	1176	4258
Griffin 29-E	952	4375
Griffin 30-E	1716	4497
Tide Water et al, Pettit 8-E	960	4397
Pettit 9-E	1040	4281
Wilbarger County—		
J. A. Wood et al, Womack 3-D	4	1774
Young County (Wildcats)—		
Marie Eckert et al, Willard 1	*	970
E. L. Orr et al, Webb 1	4	703
Young County—		
Cosden Pet. Corp., Steele 2 (pb 3986)	¶50.0	4546
Thos. D. Humphrey, Craig 1	1168	5060
Chas. B. King et al, Prideaux 1	3	556
OLD WELLS DEEPENED		
Montague County (Ringgold)—		
Benson Bros. et al, Seay 1 (otd 5762)	484	5791
Wichita County—		
Falls Ref. Co., Tidwell 1 (otd 3856)	†	4103
Texas Co., Marriott 22 (otd 1795) (pb 1749)	7	1940

West Texas

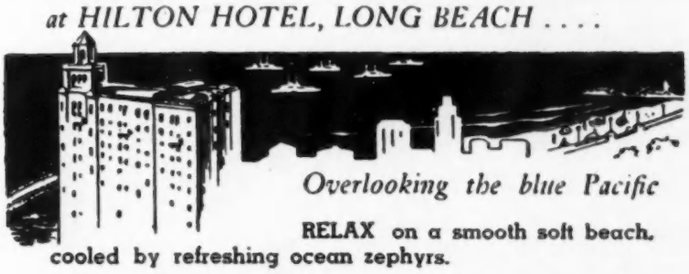
Company, Well and Location	Init. Prod. Bbls.	Depth
Andrews County (Wildcat)—		
Fuhrman Pet. Corp., Siedel 1	*	4600
Cochran County (Slaughter)—		
Atlantic Ref., Boyd-Humble 20	1250	5014
Cascade Pet. Co., Igoe-Smith 4	1475	5017
Crane County (Gulf-Waddell)—		
Gulf, Waddell 44	9496	3492
Crane County (Jordan)—		
Atlantic Ref., University 1-G	420	3598
Crane County (Sand Hills)—		
Humble, Tubb 59	421	4590
Crockett County (Wildcat)—		
Forest Dev. Corp., Shannon 1	*	1778
Crockett County (World-Powell)—		
Armer & Armer, Powell 2-C	113	2619
Ector County (Foster)—		
Forest Dev. Corp., Moss 12-H	197	4335
Sinclair Prairie, Johnson 13-A, sec 48	1232	4168
Texas Co., Johnson 3	864	4150
Ector County (Goldsmith)—		
Gulf, Goldsmith 366	1089	4257
Goldsmith 367	363	4207
Ector County (North Cowden)—		
Sinclair Prairie, Johnson 11-C	423	4290
Johnson 8-D (pb 4197)	897	5474
Johnson 14-D	2417	4163
Fisher County (McCaulley)—		
Mineral Resources, Inc., Prater 1	*	3367
Gaines County (Cedar Lake)—		
Stanolind, American Warehouse 4	577	4765
Gaines County (Seminole)—		
Amerada, Riley 1-B	716	5285
Humble & T. P. Coal & Oil Co., Hahn 3	657	5315
Hockley County (Slaughter)—		
Devonian Oil Co., Citizens Bank 4	980	5001
H. A. Hedberg et al, Slaughter 2	894	4990
Honolulu Oil Corp., Mallet 9-B-11	1164	5030
Magnolia, Mallet 8-D	914	4985
Sid Richardson et al, Pirkle 1	1032	4980
J. R. Sharp et al, Stallings 5-B	511	4952
Skelly Oil, McRae 2	760	4954
Stanolind, Slaughter 20-A	922	5057
Slaughter 23-B	1074	5048
Slaughter 25-B	444	4970
Texas Co., Hudgens 1	323	5015
Slaughter 29	1074	5005
Western States Gaso. Corp., Frazier 12	1907	4981
Mallet 6-B	1074	5030
Howard County—		
Sinclair Prairie, Dodge 73	233	2795
Mitchell County (Wildcat)—		
Wilbanks-Dockery-Lockhart, Brown 1	†	1000
Pecos County (Abell)—		
Phillips Pet. Co., Silverman 3	1308	5229
Sinclair Prairie, Silverman 1	2006	5240
Pecos County (Lehn)—		
Burk Roy. Co., Sullivan 2-C	120	1748
Pecos County (White-Baker)—		
Cardinal Oil Co., White-Baker 5-E	102	1927
Pecos County (Wildcat)—		
J. E. Redmonds-J. L. Green & Davis, Iowa Realty 1	*	6010
Scurry County (Northwest)—		
A. R. Forester et al, Murphy 1	206	1848
Winkler County (Gulf-O'Brien)—		
Gulf, O'Brien 180	210	2773
Winkler County (Emperor)—		
Sam Weiner et al, Halley-Texaco 1	¶1.0	3023
Winkler County (Hendrick)—		
Texas Co., Cowden 2-B	169	2990
Winkler County (Keystone)—		
Sid Richardsons Oils, Inc., Keystone-Jenkins 1	369	3422
Yoakum County (Wasson)—		
Aloco Oil Co., White-Texaco 8	462	5345
Denver P&R Co., Whittenburg 32	978	5170
T. P. Coal & Oil Co., Bennett 31	183	5239
OLD WELLS DEEPENED		
Ector County (North Cowden)—		
Stanolind, Midland Farms 1-A (otd 4480)	392	4647
Howard County—		
Superior Oil Corp., Roberts 11-E (otd 1436)	235	2655

West Central Texas

Company, Well and Location	Init. Prod. Bbls.	Depth
Brown County—		
G. A. White et al, Newton 1	*	1340
Coleman County (Wildcat)—		
M. R. Hart et al, Seale 1	*	1982
Coleman County—		
McKissick & Robertson, Finley 1	*	3700
States Oil Corp., Hudson 1-B	130	3545
Comanche County (Wildcat)—		
McCrea & Flornoy, Beard 1	*	650
Jones County—		
Butler-Horne Dr. Co., Wimberly 1	294	2230
J. L. Collins & Co., Fikes 1 (new pay)	552	2246
Fain-McGaha Oil Corp., Burns 5	†	1933
J. L. McMahon-W. F. Walker, Akard 1	120	2144
Shackelford County (Wildcats)—		
F. O. Akin et al, Shotwell 1	*	2010
Mikeworth & Nolte, Ballieu 1	*	684
Shackelford County—		
St. Marys O&G Co., Leech 9	2	584
Ungren & Frazier et al, Dyer 4-A	20	927
West & Honea, Dyer 2	*	1020
Stephens County—		
C. Andrade III et al, Walls Pasture 1	¶1.1	4120
Wittmer-Knight-Ewing, Loving 1-A, (new pay)	28	3575
GAS INPUT WELL		
Shackelford County—		
St. Marys O&G Co., Diller 10	*	550

Vacation in a Cool Sea Breeze

at HILTON HOTEL, LONG BEACH . . . .



Overlooking the blue Pacific

RELAX on a smooth soft beach, cooled by refreshing ocean zephyrs.

FISH Just off the coast, world's finest sport fishing waters.

MOVIE STARS. yes, Hollywood and Los Angeles are just 25 miles away. Complete outdoor sport facilities.

COOL **COMFORTABLE** **ECONOMICAL**

Single Rates $2.50 up

Double $3.50 up

300 Rooms • 300 Baths

HILTON HOTEL

LONG BEACH, CALIFORNIA

United States Well Completions—*Continued*

Texas Panhandle

Company, Well and Location	Init. Prod. Bbls.	Depth
Carson County—		
Texas Co., Boney 26	132	3173
Gray County—		
Sinclair Prairie, Worley 4	205	3197
Stanolind, Bowers 2-B	*	3198
W. H. Taylor et al, Taylor 2	¶12.6	2620
Texas Co., Brown 8	187	3285
Chapman 8-B	67	2760
Davidson 4	267	2980
Harrah 13	247	3264
Short 10	172	2930
Hutchinson County—		
Shell, Harvey Sisters 27-B	345	3073
Texas Co., Pond 36	105	3045
Potter County (Wildcat)—		
Canadian River Gas Co., Bivins 28-A	*	3950
Wheeler County—		
Smith Bros. Ref. Co., Johnson 10	42	2510

Southwest Texas

CORPUS CHRISTI DISTRICT

Company, Well and Location	Init. Prod. Bbls.	Depth
Bee County (Wildcats)—		
Hewit & Dougherty, Ray 1	*	6353
Rowe & Mid-Continent, O'Connor 1	*	4911
Brooks County (Alta Mesa)—		
Standard of Texas, Mestina 16	76	3020
Calhoun County (Wildcat)—		
Gulfboard, State 1-114	*	11020
Goliad County (Weser)—		
Hobsco, Albrecht 3-B	*	5318
Jackson County (Ganado)—		
Texaco, Mauritz 4-A	550	6440
Jackson County (LaWard)—		
Humble, Drushell 1	250	5258
Jackson County (Lolita)—		
Humble, L. Ranch 7-B	450	5959
Magnolia, Wyche 1	500	5950
Jackson County (West Ranch)—		
Magnolia, West 179-A	500	6155
West 181-A	800	5105
West 182-A	700	6167
West 183-A	550	5275
Jackson County (Wildcat)—		
Texaco, Kolle 1	*	4855
Jim Wells County (E. Premont)—		
Magnolia, Seeligson 18	525	6584
Jim Wells County (Wade City)—		
San Antonio Pet. Co., Welhausen 2	350	4926
Live Oak County (Oakville)—		
Simmons, Dullihan 1	*	2876
Live Oak County (White Creek)—		
H. Coquat, Triplett 1	*	1705
Live Oak County (Wildcat)—		
C. H. Callghan, Smith 1	*	1310
J. H. Durbin, Davidson 3	*	435
Nueces County (Agua Duice)—		
C. P. Burton, Wolter 1	¶20 & 200	6945
Tom Graham, Wolter 1	¶20 & 200	6982
R. H. Hawn, Wofford 1-D	600	7078
Nueces County (Bentonville-King)—		
Southern Minerals, King 11-A	350	5614
Nueces County (E. Flour Bluff)—		
Humble, Flour Bluff-State 1-K	300	8694
Nueces County (Minnie Bock)—		
Windsor, Howze 9	250	3822
San Patricio County (Midway)—		
Gibson, Floerke 5	¶8.0 & 75	5324
Victoria County (Coletto Creek)—		
Avrill & Cox, Etta Terrell 5	200	2875
Victoria County (Victoria)—		
Rowan & Hope, Piegsa 2, new sand	¶21.0	3052

LAREDO DISTRICT

Company, Well and Location	Init. Prod. Bbls.	Depth
Duval County (Casa Blanca)—		
Texaco, DCRC 49	¶0.33	1053
Duval County (Charamousca)—		
Magnolia, DCRC 19 (290), outpost	*	1723
Manley & Campbell, Neeley 1, outpost	*	2009
Duval County (Labbe)—		
Butler, Cartter & Douglas, Labbe 2	91	2975
Duval County (Lundell)—		
Government Wells Oil Co., Lundell 55	68	1357
Duval County (Wildcat)—		
Frank Gravis, Loving 1	*	5760
Jim Hogg County (Colorado)—		
Humble, King-Colorado 28-B	450	2956
McMullen County (S. Campana)—		
Argo, Edrington 2-I	250	3041
Starr County (Los Olmos)—		
Ed Lindberg, Davis 10	3	465
Starr County (N. Rincon)—		
Sun, Mateo Saenz 5	450	4785
Starr County (Rincon)—		
Continental, T. B. Slick Est. 49-A	32	4204
Slick 106-A	400	4228
Slick 110-B	500	4112
Starr County (Sun)—		
Humble, Montalvo 9	*	5152
Sun, McKinney 12	*	4939
Speer 10-B	600	4670
Webb County (Killam)—		
O. W. Killam, Garcia 18	101	2065
Garcia-Villreal 14	71	2080
Webb County (Wildcat)—		
Magnolia, DCRC League 1, 2	*	2801

SAN ANTONIO DISTRICT

Company, Well and Location	Init. Prod. Bbls.	Depth
Caldwell (Tenney Creek)—		
Ellmag, Connoly 1-C	500	2598
Medina County (Chicon Lake)—		
A. A. Murrell, Fee 19	2	429
Milam County (Minerva Rockdale)—		
T. Y. McCormick, McGuire 1	2	640
McGuire 2	2	678
Milam County (Wildcat)—		
M. A. Hayes, Jr., Donaldson 1	*	1930
Williamson County (Wildcats)—		
S. W. King, Stauffer 1	*	1092
H. C. Leford et al, Kutzschbach 2	*	822

Texas Gulf Coast

Company, Well and Location	Init. Prod. Bbls.	Depth
Chambers County (Anahuac)—		
Humble, Middleton 61	662	7226
Chambers County (Barbers Hill)—		
Sun Oil, Wilburn 17	67	4935
Fort Bend County (Clodine)—		
Providence Oil Co., Wing 1	607	7536
Fort Bend County (N. Thompson)—		
T. S. Loffland, State 3	153	7890
Galveston County (Capien)—		
Sun Oil, Zinn & Forman 8	147	7577
Galveston County (Greens Lake)—		
Sun Oil, Hughes 11	41	5474
Harris County (Dyersdale)—		
H. C. Cockburn, Burkitt 27	436	4068
Jack W. Frazier, Mims 1	257	4080
Tide Water, Roemer & Modglin 1	68	4076
Jackson County (West Ranch)—		
Magnolia, West Ranch 181-A	347	5106
Liberty County (Hardin)—		
James R. Nowery, Humphreys 4	113	7658
Matagorda County (Markham)—		
Powers Prod. Co., Meyers et al 2-C	400	...
Matagorda County (North Markham)—		
Sun Oil, Braman et al 3	¶3.8 & 86	8100
Tyler County (Wildcat)—		
Republic Prod. Co., Hooks 1	¶	4976
Wharton County (Withers)—		
Texas Co., Pierce Est. C-99	115	5395

Utah

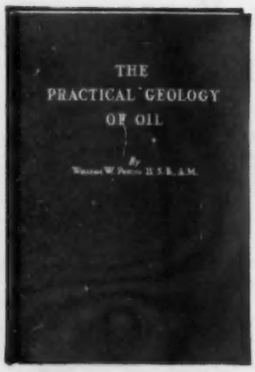
Company, Well and Location	Init. Prod. Bbls.	Depth
Grand County (Sandberg)—		
Sandberg Pet. Co., Govt. 1, se ne sw 7-31s-19e	*	2470

Wyoming

Company, Well and Location	Init. Prod. Bbls.	Depth
Fremont County (Maverick)—		
Kirk Oil Co., Tribal 4, nw nw sw 23-6n-2w	500	1530
Sweetwater County (Lost Soldier)—		
Sinclair-Wyoming Oil Co., Lost Soldier 101-A, nw nw nw 11-26n-90w	2400	4309
Weston County (Osage)—		
Wyoming O. & G. Co., Fee 22, e sw se 19-46n-63w	10	1423
Weston County (Six Mile Basin)—		
Pierre LaFleische, Dober 1, ne ne ne 21-45n-63w	*	3614

West Virginia

Company, Well and Location	Init. Prod. Bbls.	Depth
Braxton County—		
Pittsburgh & West Va., Boggs 7836	¶0.07	2018
Geo. Jackson, Bosley 1	*	...
Calhoun County—		
Hope Natural, Hathaway	¶0.15	1615
Clay County—		
Pittsburgh & West Va., Elk River Coal Co. 7816	¶0.06	1966
Doddridge County—		
Braden & Creighton, Martin 1	¶0.04 & 2	2616
Gilmer County—		
Pittsburgh & W. Va., Messinger 7830	¶0.10	1966
Carnegie, Neely 1560	¶0.48	1937
Hope Natural, Bennett 8554	¶0.22	2166
Jackson County—		
Godfrey L. Cabot, McLean Hrs. 9	*	5333
Kanawha County—		
Columbian, Wilkinson 1	¶1.2	4888
Godfrey L. Cabot, Morton 6	¶3.6	5125
Lincoln County—		
Bulger Gas, Dotson 1	¶0.2	3868
A. F. Morris, Sias 2	¶0.5	3837
Preston County—		
M. E. Davis et al, Cobun et al 1	*	1500
Putnam County—		
Monickle Gas, Lake 1	¶0.10	4070
Harry Harmon, Yoder 1	¶0.85	1785
Ritchie County—		
W. V. Investment, Kelly 1	*	2551
P. J. McDonough, Mason 2	¶0.03	...
Taylor County—		
Pittsburgh & W. Va., Beckner 6120	*	935
Upsher County—		
Pittsburgh & W. Va., Marple 7775	¶0.35	4716
Wayne County—		
United Carbon, Toney 2	¶0.30	3012



"THE PRACTICAL GEOLOGY OF OIL"

By WILLIAM WOODS PORTER II, S.B., A.M.,
Consulting Geologist

A new book which will be of special interest to executives, engineers, draftsmen and others engaged in the oil business.

In this book the basic geological principles involved in all phases of the oil business, and apart from the department of the professional geologist, are described in a book short enough to be read easily, non-technical enough to be understood without previous study of geology and complete enough to make fundamental geological processes understandable. No one with a real interest in the oil business should be without an understanding of the geological background.

This book is interesting as well as instructive.

CONDENSED TABLE OF CONTENTS

CHAPTERS:

1. Geological Problems.
2. Geological Names.
3. Introduction of Rocks.
4. Minerals.
5. Rocks.
6. Erosion.
7. Geological Time.
8. Fossils.
9. Sedimentation.
10. The Crust of the Earth.
11. Structural Geology—Folding and Faulting.
12. Concentration of Oil.
13. Unconformities.
14. How Wells Are Drilled.
15. Geology of the Hole.
16. Geological Exploration.
17. Geological Maps.
18. What Price Oil Fields.
19. Sources of Geological Information.

145 Pages **Size 5½" x 8¼"** **Cloth Binding** **Price $1.50**

Send Orders to

THE GULF PUBLISHING COMPANY

P. O. Drawer 2608 Houston, Texas

WILDCAT REPORT
New Starts and Completions

CALIFORNIA
FIRST REPORTS

Kern County—General Pet Corp.'s S. P. 51-15, sec 15-28-24, lcn, Shafter area. Texas Co.'s Anderson Inc. 1, sec 19-28-20, lcn. Shales Hills area.

Los Angeles County—Los Nietos Valley Oil Co.'s Woodward 1, sec 29-2-11, Celler, Puente Hills area.

COMPLETIONS

Fresno County—Seaboard Oil Corp.'s Hagood 2, sec 6-17-13, td 4589 ft, Moreno 3064 ft, base sand zone 2475 ft, abnd, Cantua Creek area.

Kern County—Tide Water's Islais 46, sec 16-27-21, td 6545 ft, no showings, unfinished, mechanical trouble, abnd, Lost Hills area. Texas Co.'s G & L 77-1, sec 1-24-26, td 3537 ft in schist, top 3527 ft, barren Vedder 3078 ft, abnd, Richgrove area.

COLORADO
FIRST REPORT

Cheyenne County—Elmer E. Whitson et al's Christian 1, c nw se 12-13s-49w, Kit Carson dist, min rotary.

COMPLETION

Routt County—Craig & Moore's Irwin 1-X, c sw ne 33-7n-85w, abnd 3018 ft in Pre-Cambrian, Trull Anticline.

ILLINOIS
FIRST REPORTS

Clay County—J. Earl Saunder's Hoger 1, se sw se 27-4n-7e, dr.

Clinton County—Texas' Grey 1, s½ nw se 35-3n-2w, lcn.

Gallatin County—B. A. Murrelle's Fitzgibbons 1, sw sw sw 24-10s-9e, dr.

Lawrence County—J. S. Young's Gerhart 1, c n½ se se 20-4n-10w, lcn.

Washington County—C. V. Richardson's Kasten 1, sw sw sw 27-1n-2w, lcn.

White County—Harry Randall's Hubele 1, c s½ nw nw 15-5s-9e, lcn. Anow Dr. Co.'s Aud 1, se sw se 35-6s-8e, lcn.

COMPLETION

Bond County—Woosley's Sapp 1, se ne sw 22-5n-4w, td 650 ft, pb 550 ft, Pottsville sd 540-550 ft, 5 bbls oil.

Clinton County—Hughes Pet.'s Hohman 2, se nw se se 10-2n-1w, abnd 1460 ft.

Lawrence County—W. D. Anderson's Stockman Hrs. 1, nw sw sw 7-2n-12w, abnd 2442 ft.

Marion County—Tex Harvey's Kagy 7-B, sw se se 33-3n-2e, abnd 3742 ft, otd 3565 ft.

Wabash County—Joe Young's Price 1-A, nw nw nw 1-1n-12w, Bethel 1978 ft, td 1990 ft, 20 bbls oil.

Wayne County—Robinson & Continental's Puckett 1, c e½ se se 17-2s-8e, abnd 3410 ft.

INDIANA
FIRST REPORT

Posey County—Paul Rossi's Dempsemeyer et al 1, nw nw ne 32-6s-12w, lcn.

COMPLETIONS

Daviess County—R. D. Brown, Inc.'s Birch 1, c s½ se nw 21-2n-6w, abnd 874 ft.

Greene County—Ohio Oil's Wells 1, c n½ nw se 2-7n-4w abnd 1410 ft.

Monroe County—Deskins et al's Cowling 1, sw sw nw 34-7n-1e, abnd 1830 ft.

Posey County—Joe Bander's Allyn 1, e½ sw se ne 24-6s-13w, abnd 379 ft. R. D. Martin et al's Wolf & Harlem 1, se se sw 22-7s-15w, McClosky 2795-2800 ft, pb 2810 ft, td 2957 ft, 20 bbls water, 8 bbls oil.

KANSAS
FIRST REPORTS

Barton County—Helmerich & Payne et al's Schultz 1, c e½ ne ne 8-20-15w, dr. Helmerich & Payne et al's Schmidt 1, c e½ ne se 20-20-15w, dr.

Greenwood County—C. P. Welch et al's Alspaugh 1-A, swc nw 16-28-12e, dr.

Pratt County—Skelly's Henderson 1, nec sw 2-26-14w, lcn.

Russell County—R. E. Day et al's Nuss 1, nec sw 15-15-11w, dr.

COMPLETIONS

Barber County—Pryor & Lockhart et al's Ishmael 1, c s½ se sw 35-34-11w, 15 mi se Medicine Lodge pool, Mississippi 4646 ft, base Mississippi 4815 ft, hfw, Chattanooga 4990 ft, Viola 5052 ft, Simpson 5142 ft, Wilcox 5298-5335 ft, Arbuckle 5339 ft, abnd 5354 ft.

Cowley County—Mead Prod. Co. et al's McMichael 1, nw sw sw 35-33-5e, 3 mi e Gueda Springs pool, Kansas City 2865 ft, Bartlesville 3366 ft, Mississippi 3401 ft, abnd 3437 ft.

Greenwood County—C. T. Welch et al's Crawford 1, ne se se 17-28-12e, 5 mi e Severy area, Lansing 551 ft, Kansas City 890 ft, hfw, abnd 1098 ft.

Graham County—Cities Service Oil Co.'s Gordon 1, se ne nw 1-8s-22w, 9 mi nw Morel pool, Lansing 3352 ft, Conglomerate 3647 ft, Arbuckle 3664 ft, abnd 3698 ft.

McPherson County—Kiowa Drl. Co.'s Reusser 1, sec 26-21-2w, 3½ mi w Graber pool, Topeka 1795 ft, Lansing 2355 ft, Mississippi 2983 ft, Wisener 3412 ft, Hunton 3418 ft, Sylvan 3480 ft, Viola 3532 ft, Simpson sd 3566 ft, Arbuckle 3643 ft, abnd 3660 ft.

Norton County—Helmerich & Payne et al's Hewitt 1, c s½ se ne 11-4-21w, Hewitt pool disc, Anhydrite 1830 ft, Topeka 3194 ft, Lansing 3402 ft, Arbuckle 3655 ft, Pre-Cambrian 3746 ft, td 3750 ft, pb 3407 ft, 1500 gals acid, 272 bbls, 36.8 gr.

Scott County—Atlantic Ref. Co.'s East Rosine 1, c ne ne 34-19-33w, 3 mi nw Shallow Water pool, Heebner 3850 ft, Dodge 3860 ft, Lansing 3895 ft, Marmaton 4420 ft, Cherokee 4579 ft, abnd 4800 ft.

KENTUCKY
FIRST REPORTS

Breckenridge County—Porter Evans' DeWitte 1, 15-0-35, dr.

McLean County—Hudson et al's Morgan 1, 3-M-30, lcn.

Ohio County—A. E. Elliott et al's Withers 1, 21-N-34, dr.

Union County—Joe Minton & Glenn Dial's Deacon 1, 17-Q-20, lcn.

COMPLETIONS

McLean County—J. C. Miller et al's Tanner 1, 24-M-29, abnd 1862 ft.

Ohio County—Porter Evans' Luther Neil 1, 2-N-34, abnd 429 ft.

SOUTH LOUISIANA
FIRST REPORTS

St. Martin Parish—Amerada Pet. Corp.'s St. Martin Land Co. 1, 5 mi e Sec 28 dome, sec 19-9s-8e, lcn.

Rapides Parish—M. H. Marr's Lee Lbr. Co. 1-A, 50 ft north Lee Lbr. Co. 1 dry hole, sec 6-5n-3e, South Catahoula Lake area, dr 150 ft.

COMPLETIONS

Allen Parish—F. K. Campbell, Jr.'s Bowles 1, se Sugartown area, sec 14-3s-6w, td 7795 ft, side-wall cores 7764, 7768, 7260 ft, no show, Cockf. 6876 ft, Eponides Yegua 7085 ft, abnd.

Avoyelles Parish—Joe Humphreys, Tr.'s Frazee 1, Center Point prospect, sec 6-3n-3e, td 6390, Wilcox 5986 ft, Sparta 3753 ft, abnd.

Plaquemines Parish—Discovery well Bastian Bay field, Phillips Pet. Co.'s LL&E-Fee 1, 1½ mi ne LL&E-State 1, dry hole, td 10,710 ft, 9⅝-in 10,073 ft, perf 9350-55 ft, dst 15 bph, started making sw perf 9350-53 w/10, comp 324 bpd 10/64-in ch, tp 2400, gor 2010-1, 37-gr.

Rapides Parish—Marr et al's (was Chamblee & Pitts) Lee Lbr. Co. Ltd. 1, South Catahoula Lake area, sec 6-5n-3e, otd 5010 ft, pb and s/t 4234 ft, junked.

MICHIGAN
FIRST REPORTS

Missaukee County—Turner Pet. Corp.'s Blue 1, c n½ nw sw 33-22n-6w, dr.

Muskegon County—Jacob Bolema's Whitlock 1, c e½ ne sw 34-10n-15w, rig.

Otsego County—Burks White's Koski 1, se 31n-3w, dr.

COMPLETIONS

Arenac County—Basin & Rayburn's Mutch 1, nw nw se 17-19n-4e, Dundee 2908 ft, abnd 3010 ft.

Bay County—L. Bagwell's Eigner 1, nw nw ne 3-13n-6e, Berea 2140 ft, abnd 2141 ft.

Cheboygan County—Lenoran Pet. Co.'s Commeau 1, se se 23-35n-1e, abnd 1150 ft.

Montmorency County—A. S. Hoyt's Rea 1, nw sw nw 24-30n-3e, abnd 1950 ft.

Muskegon County—H. C. Nelson's Slocum 1, c ne se 33-12n-17w, abnd 1000 ft.

Ottawa County—Associated Pet. Co.'s Van Zoeren 1, ne nw se 14-5n-14w, abnd 1600 ft.

MISSISSIPPI
COMPLETION

Leake County—Sinclair-Wyoming Oil Co.'s Community Pearl River 1, se se 28-9n-6e, elev 409 ft, Tallahatta 822 ft, Wilcox 1102 ft, Clayton 3794 ft, Eutaw (Blossom) 4929 ft, Tuscaloosa (Woodbine) 5435 ft, abnd 9009 ft.

MONTANA
FIRST REPORT

Yellowstone County—Yale Oil Corp.'s Govt. 1, c ne se 7-2s-26e, Basin Creek, dr 1120 ft.

NEBRASKA
COMPLETIONS

Otoe County—H. A. Risk et al's Rietsch 1, c sw sw 1-8n-10e, ne Ogallah, Granite Wash 1800 ft, abnd 1840 ft.

Richardson County—Harry Harper et al's Horn 1, c s½ ne se 35-3n-16e, northeast Falls City pool, Lansing 917 ft, Mississippi 2095 ft, Hunton 2498 ft, abnd 2654 ft.

OKLAHOMA
FIRST REPORTS

Cherokee County—Jack Mobley et al's Carter 1, nw ne sw 22-16n-22e, mim.

Creek County—Zephyr Drl. Co.'s Irelan "A" 1, ne se nw 3-16n-8e, dr. Jones Asso. Oil Co.'s Jennings 1-A, nw se ne 18-16n-8e, dr.

Garvin County—Gled Oil Co.'s Gardner 1, nw se ne 36-3n-3w, dk.

Lincoln County—Fred Haddock et al's Hert 1, sw ne se 22-17n-3e, dr.

Pictured above is a small portion of our stocks of low hub forged steel companion flanges. Available in sizes ¾" to 24" . . . 150 lb. to 2500 lb. American Standard . . . for immediate delivery.

MAINTENANCE
ENGINEERING CORPORATION
P. O. Box 2637 Phone P-3135
HOUSTON, TEXAS, U. S. A.

Muskogee County—Viersen Dri. Co.'s Frinklea 1, c sw nw 16-11n-19e, mim.

Okfuskee County—W. H. Allen's Camp 1, se ne sw 18-11n-9e, dr.

Pottawatomie County—Power Oil Co.'s et al's Shephard 1, sw ne se 23-7n-3e. dr.

COMPLETIONS

Cleveland County—Sinclair-Prairie et al's Craig 1, nec se 30-8n-1w, 2 mi e Noble, Pawhuska 3685-95 & 3775-3810 ft, Oread 4310-45 ft, Chert 4460-70 ft, Bellet City 4978-5010 ft, Checkerboard 5485 ft, base Penn and top Woodford 6840 ft, Hunton 6975 ft, Sylvan 7160 ft, Viola 7260 ft, Simpson 7323 ft, Wilcox 7625 ft, abnd 7630 ft.

Jefferson County—Danciger O. & R. McClain 1, c nw nw ne 4-4s-4w, 4 mi w Healdton pool, Pontotoc 480 ft, Hoxbar 1110 ft, Deese 1385 ft, Arbuckle lime 3485 ft, abnd 3660 ft.

Johnston County—Baldwin, Reed et al's Davis 1, c s½ sw nw 8-2s-8e, 3½ mi w Wapanucka, Hunton 1092 ft, Viola 1520 ft, Dolomite 1835 ft, Bromide 1900 ft, sd 2570-2576½ ft, abnd 2577 ft.

Kay County—Deep Rock Oil Corp's Midgley 1, nwc se 33-28n-4e, 3 mi e Mervine pool, Layton 2400-34 ft, Mississippi 3257 ft, abnd 3259 ft.

Kiowa County—Mathews-Lewis & Thorpe's Barzell 1, nec 33-7n-17w, 2 mi s Hobart pool, Conglomerate 580-810 ft, lime 884 ft, Arbuckle 940 ft, abnd 1044 ft.

Lincoln County—Allied Materials Corp. et al's Hicks 1, nwc 25-13n-6e, between Laffoon and Paden pools, new discovery, Hunton 4078 ft, Sylvan 4121 ft, Viola 4219 ft, Dense 4247 ft, Dolomite 4252 ft, First Wilcox 4272 ft, Second Wilcox 4299 ft, td 4312 ft, pb 4183 ft, perf 54 shots 4076-4129 ft, 2500 gals acid, 6,700,000 ft gas, 1600 lbs pressure (rock).

Pontotoc County—Mid-Continent's Wilson 1, sec ne 26-4n-6e, 1½ mi w Ada, Belle City 210 ft, Checkerboard 730 ft, Lower Wewoka 1040 ft, Calvin 1362-1410 ft, abnd 1532 ft.

Seminole County—R. W. Simpson et al's Reed 1, nwc sw 13-6n-6e, 1½ mi se E Konawa pool, Belle City 170 ft, Hogshooter 500 ft, Senora lime 2055 ft, Earlsboro 2325 ft, Brown lime 2670 ft, Wapanucka 2670 ft, Cromwell 2804 ft, Penn Caney 2838 ft, abnd 2860 ft. Moday Dri. Co. et al's Whitney 1, nec se 30-7n-7e, 1 mi s Little River pool, Basal Wewoka 1507 ft, Calvin 1658 ft, Senora sd zone 2038 ft, Senora lime 2125-30 ft, abnd 2250 ft.

TEXAS PANHANDLE

FIRST REPORT

Briscoe County—Phillips Pet. Co.'s Montague 1, c nw ne AB&M sec 6, blk B-4, mim.

COMPLETION

Potter County—Canadian River Gas Co.'s Bivins 28, G & M sec 44, blk 2, elec 3189 ft, abnd 3950 ft.

William M. Barret, Inc.

Consulting Geophysicists

Specializing in Magnetic Surveys

Contracts accepted for domestic and foreign projects, using the most improved instrumental and interpretative technique.

GIDDENS-LANE BUILDING
SHREVEPORT, LOUISIANA

HOUSTON LABORATORIES

Analytical and Consulting Chemist

Podbielniak Gas Analysis

Oil Field Brines, Waters and Cores
Complete Evaluation of Crude Oils
Long Distance 267, Box 132, Houston, Tex.

THE FORT WORTH LABORATORIES

Analysis of oil field brines, cores, gas, oil, and minerals. Field gas testing. R. H. Fash, Vice President; Long Distance 138. 823½ Monroe Street, Fort Worth, Texas.

MAN WANTED: A-No. 1 Joint Turner to work in oil field shop located in Rocky Mountain area. Year-round work—salary $1.25 per hour. In reply give complete references and state previous experience. Address reply to Box 555, c/o The Oil Weekly, Houston, Texas.

NORTH TEXAS

FIRST REPORTS

Archer County—P. C. Burns et al's Wilson 1, sw sw lot 1, ATNCL sec 1117, lcn. Cochran & Cain's Minnich 1, sw part lease Jose Ostane sur A-333, lcn. White & Duncan's Roy H. King, tr (Richardson) 1, SWc blk 8, J. Scott's sur A-374, lcn; King (Richardson) 1-A, NWc blk 24, J. Scott sur A-374, lcn.

Clay County—E. C. Harlin Jr. et al's Owens 1, SWc n½ west 135 ac, blk 50, Specht-McCutcheon sur, lcn.

Throckmorton County—Humble's Parrott 1, c sw sw TE&L sec 957, lcn 4500-ft test.

Young County—Marie Eckert et al's Gadberry 2, ne nw TE&L sec 227, lcn.

COMPLETIONS

Archer County—W. B. Hamilton et al's Cartwright 22, SWc Jas. Webb sur A-664, Gunsight 1145-47 ft, Canyon 1832 ft, Bend 4759 ft, cherty-conglomerate 5148-64 ft, pb from 5211 ft, 60 qts nitro 5149-64 ft, new pool, 8 bbls oil 25 bbls water. Harman & West's Shawver 1, se part w 60-ac n½ tr, E. L. Ry. sec 2, A-1171, abnd 1601 ft.

Clay County—Seth Cockrell et al's Henry & Estep 1, NEc sw blk 62, Byers subd, abnd 1280 ft. Fain-McGaha Oil Corp.'s Bently 1, nwc sw blk 45, Specht-McCutcheon sur, abnd 1283 ft. W. B. Hamilton et al's Wineinger 1, nw se blk 45, Specht-McCutcheon sur, abnd 1310 ft.

Cooke County—Burk Roy. Co.'s Wilson (Ware) 1, A. C. Bailey sur A-44, new upper pay Wilson pool, sand 2065-86 ft, td 2224 ft, pb 2086 ft, 15 bbls oil 30 bbls water.

Jack County—Paul Steed et al's Dunlap 1, NEc BS&F Ry. sur, new deep Strawn pay Mathis pool, sand 3236-57 ft, td 3261 ft, 24 bbls 43-gr.

Young County—Marie Eckert et al's Willard 1, NWc se TE&L sec 227, abnd 970 ft. E. L. Orr et al's Webb 1, lot 5, A. Rohus sur, sand 690-99 ft, td 703 ft, new pool, 4 bbls.

WEST TEXAS

FIRST REPORTS

Borden County — Anderson-Prichard Oil Corp.-Osage Dr. Co.'s Clayton-Pure 1, c se sw sec 1, blk 1, John DeShazo sur, lcn.

Mitchell County—Haynes B. Ownby Dr. Co.'s Morrison 1, c se ne T&P sec 34, blk 29, Tsp. 1, lcn.

COMPLETIONS

Crockett County—Forest Dev. Corp.'s Shannon 1, SWc lot 20, league 2, Archer CSL, elev 2729 ft, anhydrite 940 ft, salt 978 ft, Yates sand 1559 ft, Soma-Noelke sand 1740 ft, abnd water 1762-78 ft.

Mitchell County—Wilbanks-Lockhart-Dockery & Robbins' Brown 1, se ne ne T&P sec 43, blk 27, elev 2087 ft, 150,000,000 ft air daily 987-1000 ft, junked.

Pecos County—J. E. Redmond-J. L. Greene & Davis' Iowa Realty 1, c e¼ of w¼ H&GN sec 29, blk 10, elev 2525 ft, top detrital 5340 ft, Simpson 5370 ft, abnd 6010 ft.

WEST CENTRAL TEXAS

FIRST REPORTS

Callahan County—Cordova Union Oil Corp.-Geo. B. McCamey's Windham 1, c e½ se se Victoria CSL sec 21, lcn.

Eastland County—E. M. Thomasson et al's Busbee 1, c east 40-ac ne¼ E. T. Ry. sec 7, blk 2, sp.

Hood County—J. M. Seaberry et al's Slocum 1, swc 800-ac tr and Nancy Smith sur A-512, dr 230 ft.

Taylor County—Hedrick Oil Co.'s Arrant 1, T&P sec 53, blk 16, mim.

COMPLETIONS

Coleman County— M. R. Hart et al's Seale 1, E. N. Eubanks sur, abnd 1982 ft.

Comanche County—McCrea & Flornoy's Beard 1, NWc T. E. Ry. sec 2, A-1050, abnd 650 ft.

Jones County—J. L. Colins & Co.'s Fikes 1, nec 43½-ac lse, ne¼ blk 105, DeWitt CSL sur, new shallow pay Wimberly pool, sandy-lime 2234-46 ft, 1000 gals acid, 300 bbls oil 13 hrs.

Shackelford County—F. O. Akin et al's Shotwell 1, ne sw se T&P sec 55, blk 14, abnd 2010 ft. Mikeworth & Nolte's Ballieu 1, nw nw Bayland Orphan Home sec 17, abnd 684 ft.

Stephens County—C. Andrade, III, et al's Walls Pasture Co. 1, ne ne Orphan Asylum Lands sec 13, new deep pay ¾-mi w Loving pool, initial 1,185,000-ft 1570-lb rock pressure gas, lime 4069-82 ft, td 4120 ft.

SOUTHWEST TEXAS

FIRST REPORTS

Brooks County—Standard of Texas' Hocker 1, Palo Alto gr, sh 1, 18 mi w Falfurrias, Palo Blanco pros, prep mi 5500-ft test, Allen & Morris contractors.

Caldwell County—Fred J. Adams' Bankers Life Co. 1, John Tyler sur, 4 mi sw Lockhart, lcn 2000-ft test.

Jackson County—Moore & Ahern's Burditt 1, tr 10, Woolfolk sub, Young sur, 2 mi sw LaWard fld, ru 6500-ft test, Cron & Gracey contractors.

Jim Hogg County—V. G. Schimmel et al's East 1, lots 32 and 37, El Randado gr, 6 mi s Randado, mi 3200-ft test, Schimmel's rig.

Milam County—W. S. Shadrach's Donaldson 2, W. L. Hannum sur, 3½ mi e Burlington, mi 2100-ft test.

Nueces County—W. B. Osborn and Mid-Continent's Grove 1, tr 68, Pauls sub, 1½ mi ne Banquette, lcn 7500-ft test, contract to Allen & Morris. Southern Mineral Corp.'s Bartel 1, lot 24, M. B. & K. sub, Casa Blanca gr, 6 mi nw Banquette, spud 6700-ft contract, Henshaw Bros. cont. Sam E. Wilson, Jr., and Gulf Plains Corp.'s Rivers 1, sec 18, Scotts sub, 1½ mi w Agua Dulce fld, ru 7000-ft test, Sam E. Wilson, contractor.

Starr County—T. E. Stephens' Garcia 1, sh 152, 14 mi nw Roma, lcn 3000-ft test.

Victoria County—Gulf's McFaddin 1, E. M. McFaddin sur, 2 mi e McFaddin oil prod, lcn 6500-ft test.

Webb County—D. J. Moss' Pryor 1, sec 264, 9 mi n Oilton, lcn 1800-ft test.

Wilson County—Shell's J. B. & C. M. Wells, T. Hodges sur, 4 mi sw Nixon, lcn.

COMPLETIONS

Bee County—Hewitt & Dougherty's Ray 1, 4 mi e Beeville, abnd 6353 ft. Rowe & McBride's O'Connor 1, 4 mi n Skidmore, abnd 4911 ft.

Calhoun County—Gulfboard Oil Corp.'s State 1-114, 10 mi sw Seadrift, abnd 11020 ft.

Duval County—Magnolia's DCRC 19-290, ½ mi sw Charamousca fld, abnd 1723 ft. Manley & Campbell's Neely 1, 1 mi sw Charamousca fld, abnd 2009 ft. Frank Gravis' Loving 1, 1 mi n Tesora fld, abnd 5759 ft.

Jackson County—Texaco's Kolle 1, McCrabb sur, 9 mi nw Edna, abnd 4855 ft.

Live Oak County—C. H. Callaghan's Smith 1, 2½ mi ne Sunniland, abnd 1310 ft. J. H. Durbin's Davidson 1, Whitsett townsite, abnd 435 ft.

Milam County—M. A. Hayes, Jr.'s Donaldson 1, 3½ mi e Burlington, abnd 1930 ft.

Webb County—Magnolia's DCRC League 1, 2, 14 mi nw Freer, abnd 2801 ft.

Williamson County—S. W. King's Stauffer 1, near Byersville fld, abnd 1092 ft, H. C. Lefors et al's Kutzschbach 2, 4 mi e Taylor, abnd 882 ft.

Victoria County—Rowan & Hope, Inc.'s Piegsa 1, Victoria fld, dr 3052 ft, perf 2902 ft, 21,000,000 ft gas, CIP 1500 lbs, new sand.

TEXAS GULF COAST

FIRST REPORTS

Brazoria County—Humble's Colley 1, lcn 10,000-ft test. H. E. Williams' Chapman 1, Andrew Robinson sur, lcn 6500-ft test.

Fort Bend County—Jack Frazier et al's Mason Briscoe, John Foster sur, lcn 8000-ft test.

Harris County—Ralph A. Johnston's Cockburn 1, James Jefferies sur A-492, lcn 7000-ft test.

Montgomery County—Hill & Hill's Crawford 1, Joseph Lindler sur, lcn.

Wharton County—Wynn Crosby Dr. Co.'s Poole 1, A. J. Fry sur A-434, lcn 10,300-ft test. Pure Oil's Stockton 1, Henry P. Mills sur, lcn 7000-ft test.

COMPLETIONS

Brazoria County—Shell's Clemens State Prison 5, abnd 6350 ft.

Chambers County—Gulf's State 2-R, abnd 4957 ft.

Jefferson County—Sun's Ward Est. 2, W. B. Burton lge, abnd 8938 ft.

EAST TEXAS

FIRST REPORT

Cass County—J. G. Strahan's Taylor 1, (160-ac), Howard Reams sur, rig for Paluxy test.

COMPLETIONS

Angelina County—S. D. McDaniel et al's Bonner 1, 100-ac tr, Sarah O'Dell sur, new pool, elev 1891 ft, 1 bbl oil and lots fresh water, td 1225 ft.

Franklin County—W. B. Hinton et al's Hargrave 1, S. P. Ry. sur A-468, 4 mi sw Hagansport, Georgetown 3700 ft, 1st Paluxy sand 4553-98 ft, abnd 4843 ft.

Upsher County—W. W. Bradley et al's Robinson 1, 107½-ac tr, G. T. Walters sur, elev 312 ft, Pecan 2826-3312 ft, Austin 4039-4152 ft, Woodbine series 4605 ft, abnd 4632 ft.

Wood County—Roger Lacy et al's Snider 1, center 12-ac lse, S. Castleberry sur, 5800 ft e by s Hawkins production, dd from 1750 ft, elev 306 ft, Austin chalk 4580-4660 ft, Woodbine series 4861 ft, water sand 4875-4900 ft. Bobby Manziel & Jack Dempsey's Holmes 1, SWc 20-ac tr, T. J. Rusk sur, elev 316 ft, Pecan 3060-3310 ft, Austin 4684 ft, Woodbine series 4988 ft, abnd 5318 ft.

UTAH

COMPLETION

Grand County—Sandberg Pet. Co.'s Govt. 1, se ne sw 7-21s-19e, abnd 2470 ft, Sandberg area.

WYOMING

COMPLETION

Weston County—Pierre La Fleische's Dober 1, ne ne ne 21-45n-63w, abnd 3615 ft, Six Mile Basin, showed 3100 ft water dr-stem test open 20 min Newcastle (Muddy) sand 3552-3614 ft.

MEN IN THE INDUSTRY'S NEWS

R. A. WILSON, Dallas, has announced acquisition of all assets of Kibele Manufacturing Company, and organization of Equipment Engineers, Inc., to succeed Kibele Manufacturing Company. Products of Kibele will be marketed under the trade name of "Double E," as will also such new items of oilfield equipment as may be developed from time to time. Wilson has been president of the Kibele company, and has been active in affairs of the Rotary Drilling Equipment Committee of the A-P-I.

J. M. Shimer has been named vice president, and A. P. Brown secretary and treasurer of Equipment Engineers. Until May 1, Shimer was vice president of Oil Well Supply Company in charge of engineering, having served in that capacity since the merger of Oil Well and Wilson-Snyder Manufacturing Company in 1929. Earlier, he was vice president of Wilson-Snyder in charge of engineering and manufacturing, having started as general superintendent in 1920. He has been active in A-P-I work as chairman of the Manufacturers Sub-Committee for Rotary Drilling Equipment during the past six years.

J. M. Shimer **A. P. Brown**

Brown has been connected with the Kibele company for four years, and has been in the accounting field for the past 12 years since his graduation from Southern Methodist University in 1929.

No change is contemplated in the method of distributing "Double E" products through oil-field supply companies. Field engineers experienced in the production of oil and equipment will continue to function as in the past. Equipment Engineers will maintain engineering and manufacturing headquarters at Dallas.

JOHN R. BUNN, pioneer of slim-hole drilling in East Texas, is associated with L. M. Temple, Sr., and G. A. Crafton in the organization of the Pyramid Drilling Company, with headquarters at Tyler, Texas.

JAMES W. GERARD, New York City political figure and attorney, is president of Janger Oil Company, a Texas corporation recently organized with operating headquarters at Tyler. Horace H. Durstan and Veronica T. Hyland are vice president and secretary-treasurer respectively.

Z. H. MISCHKA resigned last week as district editor of THE OIL WEEKLY to join William R. Harshe Company, where he will head an industrial department of the public relations and publicity organization. He will make his headquarters in Chicago.

DR. ROBERT B. NEWCOMBE, Grand Rapids consulting geologist and former Michigan assistant state geologist, has been appointed chief development and production analyst for District No. 2 under Petroleum Coordinator Harold L. Ickes.

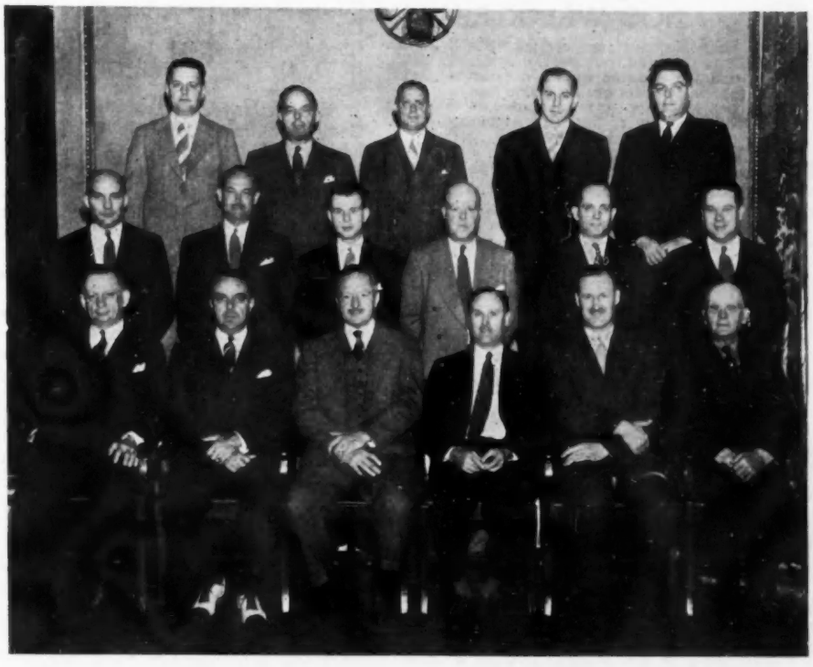
M. A. FINNEY, production superintendent for The Pure Oil Company, has resumed charge of operations in Van field, Texas. He had been stationed in Oklahoma for some months on a special assignment. W. M. Parsons will continue as assistant superintendent of the Van area.

STEVE PATTON and john Bailey of Shell Oil Company's production department, have been transferred from the Pampa field office to Tulsa.

TOM CROWELL, economist with Phillips Petroleum Company, Bartlesville, has accepted a position with the Office of Production Management, Washington.

DR. CURTIS L. WILSON, for 20 years connected with the Montana School of Mines at Butte, and for the last 13 years professor of metallurgy and head of the Metallurgy Department there, has been appointed Dean of the Missouri School of Mines and Metallurgy, Rolla, succeeding Dr. William R. Chedsey, who resigned. Wilson was reared in Baltimore Maryland, graduating from the Baltimore City College in 1916, after which he moved to Montana and graduated from the Montana School of Mines in 1920. After working a year for Anaconda Copper Company, he joined the faculty of the Montana School of Mines as instructor, and was later promoted to the head of the Metallurgy Department. He is a member of the American Institute of Mining & Metallurgical Engineers, American Chemical Society, and the Montana Society of Engineers. He served for three years as trustee of the Montana Society of Engineers, and one year as chairman of the Montana section of the American Institute of Mining & Metallurgical Engineers.

BRYAN L. DENSON of Pampa, Texas, University of Texas petroleum engineer



Sales forces of Pittsburgh Equitable Meter Company and the company's National Meter Division were consolidated during a series of meetings held at various district offices. Attending one of the meetings were, first row, Ross Burns, Fred Hartmann, W. F. Rockwell, A. E. Higgins, P. C. Kreuch and W. N. Calkins; second row, H. D. Leisenring, Harry H. Clark, R. P. Parshall, W. J. Klevorn, D. G. Kappelman and Paul Payton; back row, N. W. Simcoe, Clyde Hum, George Bender, A. H. Wille and Dan Gannon.

DO YOU NEED PIPE?

have that abandoned well salvaged

For economical casing pulling call YORK. Modern portable equipment enables us to move on location and complete the job quickly at a saving.

Our service also includes plugging, cementing, etc., for abandoning wells.

DAY OR NIGHT SERVICE

YORK OILFIELD SUPPLY CO., INC.

Kilgore, Texas Phone 1033 | Houston, Texas Woodcrest 6-8301 | Lake Charles, La. Phone 3664

GROOVES

. . . NOT WRINKLES!

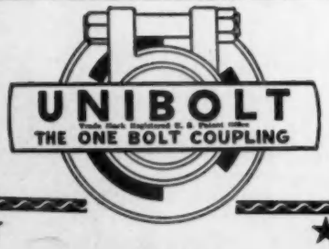
The clamping surface of the BUCK CLAMP is **Grooved**, not merely wrinkled . . . and the grooves assure a positive grip that will not let go. Scientific formation of these deep grooves make them exactly fit the lay of the wire, eliminating chances of line kinking.

BUCK CLAMP COMPANY

3714 NAVIGATION BLVD., HOUSTON, TEXAS

Export: WKM Co., Inc., 74 Trinity Place, N.Y.C.

Sold Through Leading Supply Stores



WORLD WIDE ACCEPTANCE!

★

THORNHILL-CRAVER COMPANY

HOUSTON

MEN IN THE INDUSTRY'S NEWS

graduate, has been employed by Magnolia Petroleum Company and assigned to the Abell field, West Texas.

DR. GUSTAV EGLOFF, research director for Universal Oil Products Company, Chicago, and chairman of the scientific and technical committee for the 1942 International Petroleum Exposition, last week named personnel of the committee. With B. B. Weatherby, Amerada Petroleum Corporation, Tulsa, as co-chairman, members are:

E. L. Adams, General Petroleum Corporation, Los Angeles; Walter Anderson, Naph-Sol Refining Company, Muskegon, Michigan; W. E. Andrews, Douglas Oil & Refining Company, Los Angeles; M. E. Baish, Malco Refining Company, Artesia, New Mexico; E. R. Baker, Shell Oil Company, Tulsa; T. H. Barton, Lion Oil Refining Company, El Dorado, Arkansas; L. F. Bayer, Tide Water Associated Oil Company, New York; Al Beekly, Mid-Continent Petroleum Company, Tulsa; H. T. Bennett, Mid-Continent Petroleum Company, Tulsa; F. W. Bird, Clacier Products Company, Butte, Montana; Paul Blazer, Ashland Oil & Refining Company, Ashland, Kentucky; E. Bloesch, Tulsa; Henry Boggess, Sinclair Oil Company, Tulsa; Sidney Born, Born Engineering Company, Tulsa; Reid Brazell, Leonard Refining Company, Alma, Michigan; Bruce Brown, Standard Oil Company of Indiana, Chicago; H. W. Camp, Cities Service Company, Ponca City; A. C. Carlton, Museum of Science & Industry, Chicago; R. A. Cattell, United States Dept. of the Interior, Washington; Frank R. Clark, Ohio Oil Company, Tulsa; F. S. Clulow, Shell Oil Company, San Francisco; O. L. Cordell, Bareco Oil Company, Tulsa; E. D. Cummings, Shell Oil Company, New York.

Also, C. Hayden Davis, Pana Refining Company, Pana, Illinois; D. E. Day, Richfield Oil Company, Los Angeles; John Day, Western Petroleum Refiners Association, Tulsa; T. G. Delbridge, Atlantic Refining Company, Philadelphia; T. G. Elder, National Refining Company, Cleveland; M. R. Fenske, Pennsylvania State College, State College; Max Fisher, Aurora Gasoline Company, Detroit; Steen Fletcher, Fletcher Oil Company, Los Angeles; R. A. Halloran, Standard Oil Company, San Francisco; Paul Hedrick, Tulsa World, Tulsa; E. C. Herthel, Sinclair Oil Company, East Chicago, Indiana; Don R. Hinderliter, Hinderliter Tool Company, Tulsa; F. E. Holsten, Chalmette Petroleum Corporation, New Orleans; J. P. D. Hull, American Association of Petroleum Geologists, Tulsa; D. K. Hutchcraft, Clark Engineering Company, Tulsa; R. R. Irwin, Socony-Vacuum Oil Company, Kansas City; E. W. Isom, Sinclair Oil Company, New York; J. V. Jirasek, Sharpless Solvents Corporation, Philadelphia; Dr. R. S. Knappen, Gulf Oil Corporation, Tulsa; A. J. Kramer, United States Bureau of Mines, Washington; Kent K. Kimball, geologist, Tulsa; R. L. Langenheim, University of Tulsa, Tulsa; Frank B. Long, Oklahoma Natural Gas Company, Tulsa; Wm. F. Lowe, Natural Gas Association of America, Tulsa; C. D. Lowry, Jr., Universal Oil Products Company, Chicago; R. E. Luton, Ohio Oil Company, Robinson, Illinois.

Also, Maurice A. Machris, Wilshire Oil Company, Los Angeles; B. J. Majewski, Deep Rock Oil Corporation, Chicago; K. G. MacKenzie, Texas Company, New York; Clarel B. Mapes, Mid-Continent Oil & Gas Association, Tulsa; F. L. Martin, Sunray Oil Company, Tulsa; Ralph Mathews, Battenfield Grease & Oil Corporation, Kansas City; E. V. McKenzie, Mohawk Petroleum Corporation, San Francisco; P. E. McKinney, Bethlehem Steel Company, Bethlehem, Pennsylvania; Walter Miller, Continental Oil Company, Ponca City; C. V. Millikan, Amerada Petroleum Corporation, Tulsa; G. B. Murphy, National Petroleum News, Cleveland; G. G. Oberfell, Phillips Petroleum Corporation, Bartlesville; O'Connor, Texas Company, Los Angeles; C. P. Parsons, Halliburton Oil Well Cementing Company, Duncan, Oklahoma; J. R. Parten, Premier Oil Refining Company, Longview, Texas; E. W. Pauley, Petrol Corporation, Los Angeles; A. E. Pew, Jr., Sun Oil Company, Philadelphia; W. J. Podbielniak, Podbielnak Super-Centrifugal Contacter Company, Chicago; H. R. Powers, Bethlehem Supply Company, Tulsa; Paul M. Raigorodsky, Tulsa; J. B. Rather, Socony-Vacuum Oil Company, New York; C. W. Rippie, Solvay Sales Corporation, New York; P. M. Robinson, Pennzoil Company, Oil City, Pennsylvania; M. H. Robineau, Frontier Refining Company, Denver; John E. Roth, Tide Water Associated Oil Company, Tulsa; H. L. Rothschild, Rothschild Refining Company, Santa Fe Springs, California; R. P. Russell, Standard Oil Development Company, New York; George Reid, Gulf Coast Refiners Association, Houston; Andrew M. Rowley, Tulsa Tribune, Tulsa; W. W. Scheuman, Cities Service Oil Company, Tulsa; W. A. Schlueter, Refinery Supply Company, Tulsa; L. W. Shank, Ethyl Gasoline Corporation, Tulsa; R. D. Shaw, Dowell, Incorporated, Tulsa; E. H. Skinner, Great Lakes Pipe Lines Company, Kansas City; K. C. Sclater, Petroleum Engineer, Dallas; William A. Slater, Gulf Refining Company, Pittsburgh; N. A. C. Smith, United States Bureau of Mines, Bartlesville; H. M. Stalcup, Skelly Oil Company, Tulsa; W. R. Stewart, Los Angeles; Frank Taylor, The Oil Weekly, Tulsa; J. F. M. Taylor, Shell Development Company, San Francisco; R. L. Tollett, Cosden Oil Company, Big Spring, Texas; E. H. Triphause, Taylor Instrument Companies, Tulsa; Arthur F. Truex, Sun Oil Company, Tulsa; Cary Wagner, The Pure Oil Company, Chicago; Theron Wasson. Pure Oil Company, Chicago; M. F. Waters, Hanlon-Waters, Inc., Tulsa; Dr. B. B. Weatherby, Geophysical Research Corporation, Tulsa; Harold Weber, Massachusetts Institute of Technology, Boston; G. H. Westby, Tulsa; T. R. Weymouth, Columbia Gas & Electric Corporation, New York; W. K. Whiteford, British American Oil Producing Company, Tulsa; W. G. Whitman, Massachusetts Institute of Technology, Boston; C. O. Willson, Oil & Gas Journal, Tulsa; R. E. Wilson, Pan American Petroleum & Transport Company, New York, and Robert H. Wood, Tulsa.

Squeaks from the Bull Wheel

Gentle Letdown

I've watched your acting, and I think you ought to take up writing.

You mean writing for the theatre, of course?

No, writing home for money.

A Matter of Space

Dad, what do you call a man who drives a car?

It all depends on how close he comes to me, son.

Vacation Blues

Back from your vacation at last, eh? Feel any change?

No, not a cent.

Playing Safe

"Darling, would you like to marry a man with only one eye?"

"Certainly not."

"Then let me have the umbrella."

Diplomatic

"I don't think that man upstairs likes to hear Georgie play his drum, but he's certainly tactful about it."

"Why?"

"This afternoon he gave Georgie a knife and asked him if he knew what was inside the drum."

"Eggsasperating"

How do you like your new boss?

Oh, he ain't so bad, only he's kinda bigoted.

Whadda y'mean bigoted?

Well, he thinks words can only be spelled one way.

Practice Shots

"Melvin, Melvin!"

"What, ma?"

"Are you spitting in the fish bowl?"

"No, but I been coming pretty close."

In Reverse

Come right in. Don't mind the dog.

Doesn't he bite?

That's what I want to find out. We just bought him this morning.

Good Trade

A farmer who was rather miserly in all things bought a horse at a county fair. After getting it home and stabling it, he gave it some feed but the horse refused to eat. A little later it similarly refused water.

The farmer's eyes gleamed hopefully. "By golly," he said, excitedly, "if only this nag's a good worker, what a bargain I've made!"

Revenge

"So they eloped and got married."

"And her mother—has she forgiven them?"

"I don't think so. She's gone to live with them."

Deferred

"Did Nellie reject Johnnie when he proposed?"

"No; she put him in Class 5—to be drawn on only as a last resort."

Well Cast

"Have you ever had any stage experience?"

"Nothing, except I had my leg in a cast once."

A Large Nest

As the crowded bus came to a standstill, a stout, middle-aged man descended the stairs carrying a small girl.

Tenderly placing his burden on the curb, he ascended the stairs again and shortly returned carrying a tiny dog. Placing the dog beside the child, he returned upstairs and again descended bearing a second child, which he stood beside the first. Once more he ascended the stairs and again returned, carrying a third youngster.

These evolutions were eagerly observed by a passenger seated inside the bus who, as father proceeded to dismount with his third offspring, exclaimed, "My, my, 'e must 'ave a nest up there!"

One for the Ladies

Man criticizes woman for her extravagance, but she never wastes two dollars' worth of shotgun shells to get a twenty-five cent rabbit.

Nor goes into a restaurant and buys a twenty-five cent meal and gives the waitress a twenty-five cent tip because she smiles at him—

Nor uses twenty gallons of gasoline and pays a twenty-five dollar boat hire to get where the fish aren't.

Romance Gone to Pot

Tonight I will steal beneath your balcony and whisper a sweet serenade.

Do, and I will drop you a flower.

Ah, in a moment of mad love?

No. In a pot!

Quiet, Please

"The traps on this course are very annoying."

"Yes, and I wish you would close yours."

Not for Mama's Ears

"What did your father say when you smashed the new car?"

"Shall I leave out the swear words?"

"Yes, of course."

"He didn't say a word."

Proof

When Sarah Bernhardt played in Louisville, Kentucky, many years ago, she found that the fashionable audience had engaged all the available carriages, and the only conveyance she could find to take her to the theatre was a miserably dilapidated hack, drawn by a rawboned nag and driven by a white-haired old darky in rusty, patched dress-suit and battered silk topper. Something about the forlorn-looking outfit struck the fancy of the great actress, and she ask the old man to return for her later.

After the play the darky drew up before the stage door, only to be driven away by a policeman, who would not believe his assertion that Madam Bernhardt had used his vehicle. The darky returned in a little while, and was again ordered away by the officer. Quietly, desperate, the driver descended from the box, opened the door, of his barouche, and said, "Look here, boss, if you don't believe I done brung Miss Sarah to this here theatre, just you smell my hack."—Wall Street Journal.

Gotkool
WATER CANS
& COOLERS
GOTT Water Coolers are the convenient way to keep drinking water handy to the worker, protect it from impurities. Their exclusive construction keeps water cool for long periods. Snug fitting large removable top, handy non-leaking push button faucet. GOTT Water Cans for handy field use. Your Supply Store has them, get one today! . . . .
Gott
WATER COOLER
GOTT WATER COOLER
Made in 3, 5, 8, 10, and 20 gallon sizes.
Gott
GOTT WATER CAN
Made in 1½, 3, 5, and 10 gallon sizes.
H. P. GOTT MFG. CO.
WINFIELD, KANSAS
KEEP PURE DRINKING WATER ALWAYS HANDY

NOTES FOR THE Equipment Buyer and User

Wall Cleaner
WEATHERFORD SPRING COMPANY

Wall cleaning scratchers, designated Acme and designed to remove caked mud and cuttings from the wall of the hole when cementing casting or running slotted or perforated liner, have been announced by Weatherford Spring Company, Weatherford, Texas. They are also designed to center casing or liner in the well when the scratchers are anchored at intervals.

Acme Wall Cleaning Scratcher

The scratchers are available in two styles, one for upset and one for standard casing. They permit cement to flow more evenly around the pipe, which is centered in the hole. Mud and cuttings cleaned from walls of the hole by action of the device permit a more firm bond between cement and hole.

Insulation

Union Asbestos & Rubber Company, 1821 South 54 Avenue, Cicero, Illinois, has issued Bulletin 48-965 on its line of Unibestos insulation for high-temperature service. Available in blocks, sheets and as sectional pipe covering, the material is offered in single layer sectional insulation for pipe diameters up to 36 inches, thicknesses up to 5 inches, and sheets up to 36 x 36 x 5 inches. Special sizes are available. The bulletin gives a series of pictures showing how to cover a flange, how to cover a pipe coupling, and illustrating other applications of the product in sheets and pipe covering.

Flexible Coupling
THE FALK CORPORATION

A new coupling for floating shaft requirements, designated Type P Piloted, has been added to the line of The Falk Corporation, Milwaukee. It is designed for use with exhaust draft fans, and horizontal and vertical pumps.

The coupling combines a resiliency and shock cushioning section with a low angle universal joint action to eliminate necessity of an outboard bearing on extended shafts, or auxiliary bearings on intermediate shafts. It is constructed entirely of steel, and consists of two hubs, one of which carries an integral flange to which the cover is secured, a special tempered steel member forming a complete cylindrical grid member and flanged steel cover secured to the hub flange with capscrews.

It is available in three types: single piloted, to support a long shaft extension without using an inboard bearing on the extended shaft; double piloted horizontal, an arrangement of two type P couplings with connecting shaft for super calender drives through motor room walls; and double piloted vertical, consisting of two type P couplings and the connecting shaft for use on vertical drive applications where it is desirable to have considerable distance between the driving and driven equipment.

WEIGHT INDICATOR POINTS
"SWIVEL - NECK" is a common occurrence with drillers who have to look here, there and everywhere at drilling instruments scattered all over the rig.
For many jobs, portable mud pump gauges and weight indicators are just the thing. But when your driller must control all drilling functions simultaneously . . . and when complex drilling problems constantly arise . . . he needs centralized, accurate instruments to drill an economical well.
Invest in a Martin-Decker "Sealtite." You get the most accurate and complete instrument in the field, installed right before the driller where he can easily watch—and control—drilling operations.
MARTIN-DECKER CORP. LONG BEACH, CALIF.

Sucker-Rod Catcher
O. K. TOOL COMPANY

A catcher designed to catch a sucker-rod string within three to six inches when a break occurs has been announced by O. K. Tool Company, Box 54, Huntington Park, California. Setting of slips is independent of the falling of the rod string.

The rod catcher consists of a mandrel upon which are mounted the slip expander cone, slip assembly, slip assembly balancing spring, and a heavy square helical operating spring. The upper end of the mandrel is furnished with a sucker rod coupling, and the lower portion is encased in and attached to the body, which also supplies a pin connection for attaching the rod catcher in the string.

The rod catcher is made up at any desired point in the rod string. While being run into and out of the hole, and at all times during pumping, the weight of the rods below the catcher is designed to keep the slip assembly retracted and the other parts in their proper positions. The balancing spring prevents slips from being expanded during running in and pumping.

When a break occurs in the rods, the tension in the rod catcher is released and the square spring expands, drawing the slip expander down between the slips. This spreads the slips outward into engagement with the wall of the tubing where they catch and hold the pump and all rods below the break.

The slip area provided is designed sufficiently large to prevent damage to the tubing and the cross sectional area of fluid passage through the catcher is greater than the area of the passage through pump valves and seat. No rod guide is required except when the catcher is being used in a combination tubing string. The tool is keyed so as to prevent relative rotation of the parts, thus permitting backed-off rods to be made up in the usual way.

Rotary Rig
JONES, SHELBURNE & GUFFEY, INC.

Jones, Shelburne & Guffey, Inc., 26 and Lincoln Boulevard, Oklahoma City, have announced a Super Spad rotary rig designed for speed drilling up to 5500 feet with 4½-inch drill pipe, and up to 7000 feet with 3½-inch drill pipe, depending upon size engines and rig hook-up plan used.

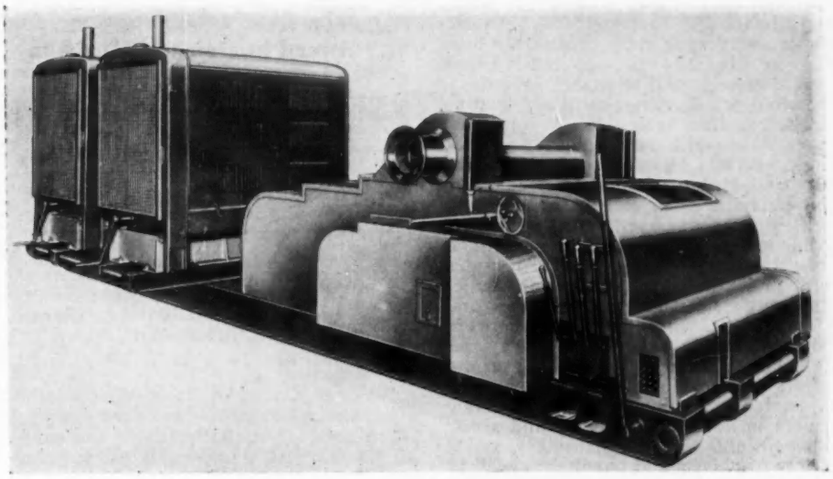
The unit employs multiple-tooth positive clutches on high-and-low drum drives which permit use of full power in all speeds and gives positive strength with friction action. Patented Micro-Matic drilling controls are provided to

insure smooth, even "feed-off" of drill pipe.

Rat-hole digger is built low into the rig to be out of the way. An automatic cathead is driven by a friction clutch. There are two speeds on drum, three on rotary table. Additional speeds can be obtained on the rotary table by use of different sprockets on the rotary drive and by varying engine speeds.

The rig employs a helical gear transmission housed in an all-steel case with removable top for inspection. Rig weighs 24,500 pounds. For portability and compactness it is constructed on a metal skid base, 24 x 7 feet.

Drum shaft is seven inches in diameter, with spherical, self-aligning roller bearings. Rim cooling is by air and water. Drum drive and cathead chains remain idle when rotating. No transmission shifting is necessary until a depth of 2500 to 3000 feet is reached, and then only for coming out of the hole.



Jones, Shelburne & Guffey Rotary Rig

Rotary Pumps

BLACKMER PUMP COMPANY

A line of rotary pumps designed for use with hydraulically operated machinery and other industrial applications, available for pressures up to 150 pounds and capacities from 50 to 700 gallons per minute, has been announced by Blackmer Pump Company, Grand Rapids, Michigan.

Standard units are furnished in reduction-gear drive, gearhead motor and V-belt drive, while standard constructions are of all iron, bronze-fitted, or all bronze. Pumps for lubricating liquids may be obtained with internal roller bearings, while external roller bearings are furnished on pumps for handling non-lubricating liquids. Pumps employing external roller bearings are equipped with mechanical seals to eliminate stuffing boxes.

Concrete Paint

THE WILBUR & WILLIAMS COMPANY

A concrete protective covering designed to provide a dust-proof finish resistant to oils, greases, alcohol and certain chemicals, designated Dye-Crete, has been announced by The Wilbur & Williams Company, Park Square Building, Boston.

In application, a stain designed to penetrate into the concrete, becoming a part of it, is first applied to the floor. Secondly, a synthetic enamel designed to adhere solidly to the stained concrete, unaffected by moisture, lime or corrosive influences, is applied, providing a glossy finish. As the concrete wears down, it remains the same color to the depth of the stain penetration.

The stain and the enamel coating, designated Defensite coating, are available in tile red, battleship grey, club green and chestnut brown.

Tools

Bonney Forge & Tool Works, Allentown, Pennsylvania, has issued Catalog 41, giving 104 pages descriptive of its line of tools. Illustrated are 1169 tools

A Source Book in Geology

By KIRTLEY F. MATHER, Professor of Geology, Harvard University, and SHIRLEY L. MASON, Geologist. 702 pages, illustrated $5.00

This new book gives a comprehensive view of the development of geological science during the last four centuries, by presenting the significant passages from writings of the great contributors to that science in the past.

The excerpts include portions of the work of 130 geologists, original statements of many important principles and theories thus being made available. Many of the excerpts are translated from Latin, French, German or Italian.

Send Orders to the

GULF PUBLISHING CO.

P. O. BOX 2608 HOUSTON, TEXAS

CAN YOU DO THIS?

"The Entirely Different Boiler and Engine Treatment"

HOLD A WHOLE month's supply of unfailing boiler scale and corrosion prevention in the palm of your hand?

YES — if it's SAND-BANUM! Only ounces applied once each week insure equipment free from scale and corrosion.

★

Write today for details of our "Satisfaction or No Money" guarantee trial offer.

★

AMERICAN SAND-BANUM CO., Inc.

9 Rockefeller Plaza New York City

WESTERN SAND-BANUM CO.

Houston, Texas Fresno, Calif.

Export Representative, PETROLEUM MACHINERY CORP.

30 Rockefeller Plaza New York City

and 74 tool sets, and included are sockets of every type with detachable handles in ¼-, ⅜-, ½-, ¾- and 1-inch square drives; stud wrenches; adaptors; crowfoot attachments; torque-indicating wrenches; box wrenches in long and short types with both ends offset, 15° angle, one end offset, extra-small, heavy duty and striking face types; miniature and electrical open end wrenches; ignition wrenches; open end engineers' wrenches, tappet wrenches in regulation and extra-long types; tu type, right angle, socket, construction, structural, angle head service, set screw and S wrenches; wheel pullers; pliers in most commonly used sizes; hack saws and blades; feeler gauges; files; tubing cutters and benders; stillson, open end adjustable and spinner wrenches; screw drivers in a variety of types and sizes; ball pein and soft face hammers, and a variety of chisels and punches as well as a large assortment of specialized tools for special jobs.

Welding System

A constant potential d-c welding system for supplying welding energy to multiple-arc circuits is described in a new eight-page booklet announced by Westinghouse Electric and Manufacturing Company.

Motor-generators with ratings from 750 to 1500 amperes to meet welding system requirements are discussed with a note on parallel operation. Mechanical parts, controls, and motor starting equipment are described. A typical wiring diagram shows electrical arrangement of principle parts in the system.

Distinctive features and prices are listed for the stationary and semi-portable units and accessories.

A copy of catalog section 26-200 may be secured from department 7-N-20, Westinghouse Electric and Manufacturing Company, East Pittsburgh.

Motors

Allis-Chalmers Manufacturing Company, Milwaukee, has issued an 8-page bulletin, No. B-6052-B, describing its complete line of Lo-Maintenance motors in ratings from 3/4 to 75 horsepower, open, enclosed and splash-proof types, AC and DC.

Cameron Iron Works Gets Navy "E" Award in Houston Ceremony

The entire personnel of Cameron Iron Works, together with officials of every branch of the armed forces of the United States, Houston city and Harris county officials, on August 21 witnessed presentation of the naval pennant "E" to the company as a symbol that its work in producing projectors for depth bombs has been excellent, and ahead of schedule.

The presentation was made by Captain T. A. Thompson, Jr., commandant of the Eighth Naval District, stationed at New Orleans, to Edmond L. Lorehn, vice president and general manager of the company.

"We at Cameron Iron Works will continue in our efforts to place the finished product in the hands of the navy at the earliest possible time," Lorehn said in accepting the award. "We are all-out for the Navy; all-out for democracy; all-out for America, and all-out to win this war."

The pennant was raised atop a flagstaff in the company yards, where it is to fly every working day. "E" pins were awarded to workers.

Weatherford Spring Company Names Distributors

Weatherford Spring Company, Weatherford, Texas, has named Frick-Reid Supply Corporation and Petroleum Equipment Company distributors in their respective territories for Acme wall-cleaning scratchers.

Nickel Alloys

The International Nickel Company, 67 Wall Street, New York, has issued a 12-page bulletin on "Individualized Inco Nickel Alloys," giving individual characteristics, mechanical properties and application information on the Inco Nickel alloys — Monel, K Monel, KR Monel, S Monel, R Monel, nickel, Z nickel and Inconel.

Letters

No Army Planes

DEAR SIR:

THE OIL WEEKLY of August 4, 1941, contains an article on page 63 regarding the awarding of a contract to the Aero Exploration Company, Tulsa, Oklahoma, for air-mapping the route of a defense pipe line from Longview, Texas, to Bayonne, New Jersey, in which it is stated that "a mosaic map is to be taken by two army planes.

Use of Army equipment in furtherance of any commercial enterprise is forbidden by law. Statements that Army Air Corps equipment will be used in such a manner, contrary to provisions of law, puts the Air Corps in an unfavorable light and may conceivably have political repercussions. It would be much appreciated if you will correct the record by publishing a statement of the fact that Army airplanes will *not* be used as was stated in the August 4 article.

H. W. BOWMAN,
Major Air Corps,
Assistant Executive.
Chief of the Air Corps
War Department
Washington, D. C.

Advertisers' Index

In the following index is shown only the advertisers having advertisements in this issue.

American Association of Petroleum Geologists 42
*American Cable Division American Chain & Cable Co. .....II Cover
American Hoist & Derrick Co..... 42
*American Sand-Banum Co..... 79
*Baash-Ross Tool Co..... 37
*Baker Oil Tools, Inc..... 1
*Baroid Sales Division National Lead Co..... 6
Wm. M. Barret, Inc..... 74
Bellevue-Stratford Hotel 52
*Bethlehem Supply Co..... 29
Buck Clamp Co..... 76
*Bucyrus-Erie Co. 60
Hotel Clark 64
*The Cooper-Bessemer Corp..... 23
*Fred E. Cooper..... 35
Crane Co. 50
*Dowell Incorporated 4
The Eagle-Picher Lead Co. 52
Fort Worth Laboratories..... 74
General American Transportation Corp. 2
*H. P. Gott Manufacturing Co..... 77
*The Gulf Publishing Co..... 31
*Halliburton Oil Well Cementing Co. .....I Cover
Hilton Hotel 71
Houston Laboratories 74
*Hughes Tool Co.....IV Cover
*Lane-Wells Company 43
Lone Star Cement Corp..... 24
Macwhyte Co. 3
*Maintenance Engineering Corp.... 73
*Martin-Decker Corp. 78
*Mission Manufacturing Co.....46-47
*National Lead Co..... 6
*Oil City Brass Works, Inc..... 80
*Patterson-Ballagh Corp. 69
*Pelican Well Tool & Supply Co... 66
Petroleum Rectifying Company of California 39
*Reed Roller Bit Co..... 27
Republic Steel Corp..... 33
*John A. Roebling's Sons Co. 55
Southern Pacific Lines..... 63
*Thornhill-Craver Co. 76
Edgar Tobin Aerial Surveys..... 42
*Unit Rig & Equipment Co...III Cover
*Wickwire Spencer Steel Co..... 41
*Witte Engine Works..... 64
York Oilfield Supply Co..... 76

* Indicates that detailed information on the manufacturer's products or services may be found in the 1941 edition of The Composite Catalog of Oil Field & Pipe Line Equipment.

Ickes Appoints 25 District Coordinating Committees

TWO hundred five men prominent in their localities in production, refining, transportation or marketing were named by Coordinator Harold L. Ickes July 12 as members of 25 district committees which will advise on matters relating to the coordination of petroleum industry activities for national defense.

The coordinator set up four committees in each district; one for each branch, to operate under a general district committee to consist of a general chairman and the chairman of each of the four functional groups.

The several committees consist of ten men each, instead of twelve as originally contemplated, so that addition may be made in the future.

In his notification of the members of the committees of their appointment, the coordinator outlined the duties of the committees as being "to advise and consult with me and with the deputy coordinator and local representatives to be designated on matters relating to the proper coordination of the activities of the petroleum industry for national defense, as set forth in the President's letter of May 28, and in the same connection to assist in performing such specific recommendations or direction as may be issued."

The committees as set up by the coordinator are published below:

District 1—(Atlantic Seaboard)

General District Committee: John A. Brown, (chairman), president, Socony-Vacuum Oil Company New York; Robert H. Colley, president, Atlantic Refining Company, Philadelphia; Walter S. Hallanan, president, Plymouth Oil Company, Pittsburgh; W. A. Jones, president, Cities Service Oil Company, New York; H. W. Dodge, vice president, The Texas Corporation, New York.

Production Committee: Walter S. Hallanan (chairman), president, Plymouth Oil Company, Pittsburgh; Forest Dorn, president, Forest Oil Corporation, Bradford, Pa.; Peter Curry, president, South Penn Oil Company, Pittsburgh; G. W. Holbrook, vice president, Bradley P. Production Corporation, Wellesville, N. Y.; R. T. Zook, president, Sloan and Zook Company, Bradford, Pa.; G. J. Hanks, vice president, Tidewater Associated Oil Company, New York; L. L. Tonkin, president, Hope Construction and Refining Company, Clarksburg, W. Va.; Parker Melvin, president, Towne-Melvin Oil Company, Bradford; D. T. Ring, vice president, Virginia Gasoline and Oil Company, Charleston, W. V.; R. A. Startzman, president, Clifton Oil and Gas Company, Parkersburg, W. Va.

Refining Committee: R. H. Colley (chairman), president, Atlantic Refining Company, Philadelphia; William F. Burt, chairman the manufacturing committee of Socony-Vacuum Oil Company, New York; W. W. Lowe, vice president, Cities Service Oil Company, New York; Arthur E. Pew, vice president, Sun Oil Company, Philadelphia; George Taber, vice president and general manager of refineries for Sinclair Refining Company, New York; Chester Smith, vice president, Standard Oil Company of New Jersey, New York; William A. Slater, vice president, Gulf Refining Company, Pittsburgh; Aubrey D. David, vice president, Bradford-Penn Refining Corporation, Clarendon, Pa.; W. S. Zehrung, president, Pennzoil Company, Oil City, Pa.

Transportation Committee: W. A. Jones (chairman), president, Cities Service Oil Company, New York; Capt. W. R. Finney, executive department Standard Oil Company of New Jersey, New York; C. H. Kounz, assistant manager marine department, Socony-Vacuum Oil Company, New York; Robert C. Tuttle, vice president, Atlantic Refining Company, Philadelphia; A. E. Atts, vice president, Sinclair Refining Company, New York; Frank C. Wright, Washington, D. C.; Don J. Smith, vice president, Pan American Petroleum and Transportation Company, New York; B. I. Graves, vice president, Tidewater Associated Oil Company, New York; H. T. Klein, executive vice president, The Texas Corporation, New York; Harry A. Logan, president, Elk Refining Company, Charleston, W. Va.

Marketing Committee: H. W. Dodge (chairman), vice president, The Texas Corporation, New York; W. L. Faust, sales manager, Socony-Vacuum Oil Company, New York; S. B. Eckert, vice president, Sun Oil Company, Philadelphia; L. T. Kittinger, vice president, Shell Oil Company, New York; M. H. Hindman, sales manager, Pennsylvania Refining Company, Butler, Pa.; M. B. Whiting, president, Whiting Oil Company, Clifton Forge, Va.; R. T. Haslam, vice president, Standard Oil Company of New Jersey, New York; J. W. Carnes, vice president, Consolidated Oil Corporation, New York; Wiley Moore, president, Wofford Oil Company, Atlanta, Ga.; Jacob Blaustein, American Oil Company, Baltimore.

District 2—(Upper Mid-Continent and Middle West)

General District Committee: Frank Phillips (chairman), chairman, Phillips Petroleum Company, Bartlesville, Okla.; O. D. Donnell, president, Ohio Oil Company, Findlay, Ohio; Paul G. Blazer, president, Ashland Oil and Refining Company, Ashland, Ky.; E. G. Seubert, president, Standard Oil Company of Indiana, Chicago; B. L. Majeski, vice president, Deep Rock Oil Company, Chicago.

Production Committee: O. D. Donnell (chairman), president, Ohio Oil Company, Findlay, Ohio; Harold B. Fell, president, Simpson-Fell Oil Company, Ardmore, Okla.; K. S. Adams, president, Phillips Petroleum Company, Bartlesville; L. P. McCollum, president, Carter Oil Company, Tulsa; A. S. Ritchie, independent operator, Wichita, Kans.; Ralph Pryor, Pryor and Lockhart, Wichita; Clarence T. Smith, attorney, Flora, Ill.; H. N. Pardee, manager, The Texas Company, Salem, Ill.; Howard Keck, vice president, Superior Oil Company, Evansville, Ind.; H. M. McClure, independent, Alma, Mich.

Refining Committee: Paul G. Blazer (chairman), president, Ashland Oil and Refining Company, Ashland, Ky.; H. W. Camp, manager of refineries, Cities Service Oil Company, Bartlesville; Walter Miller, vice president, Continental Oil Company, Ponca City, Okla.; R. R. Irwin, general manager, of refineries, Socony-Vacuum Oil Company, Kansas City, Mo.; G. W. Hanneken, vice president, Standard Oil Company of Ohio, Cleveland, Ohio; R. J. Black, refinery manager, Sinclair Refining Company, East Chicago, Ind.; Max G. Paulus, vice president, Standard Oil Company of Indiana, Chicago; Ed. Cuming, vice president, Shell Oil Company, St. Louis, Mo.; I. A. O'Shaughnessy, president, Globe Oil and Refining Company, Wichita, Kan.; C. L. Henderson, president, Vickers Petroleum Company, Wichita.

Transportation Committee: E. G. Seubert (chairman), president, Standard Oil Company of Indiana, Chicago; D. D. Irwin, president, Pure Transportation Company, Chicago; H. A. Swensrud, vice president, Sohio Pipeline Company, Cleveland; Charles R. Musgrave, vice president, Phillips Petroleum Company, Bartlesville; George Kinter, vice president, Tidewater Pipe Line Company, Tulsa; W. W. Vandermeer, president, Allied Oil Corporation, Cleveland; L. A. Snyder, vice president, Champlain Refining Company, Enid, Okla.; H. L. McReynolds, manager, White Eagle Refining Company, Kansas City, Mo.; Harry Moreland, vice president, Great Lakes Pipeline Company, Kansas City, Mo.; L. H. Prichard, president, Anderson Prichard Company, Oklahoma City.

Marketing Committee: B. L. Majewski (chairman), vice president Deep Rock Oil Company, Chicago; Amos Ball, vice president, Standard Oil Company of Indiana, Chicago; Arthur M. Hughes, vice president, Phillips Petroleum Company, Bartlesville; Leland Harmes, President, Harmes Oil Company, Allison, Iowa; R. W. McDowell, vice president, Mid-Continent Petroleum Corporation, Tulsa; Howard A.

Cowden, president, Consumers Cooperative Association, Kansas City, Mo.; C. B. Watts, vice president Pure Oil Company, Chicago; Russell Williams, president, Gasteria Oil Company, Indianapolis, Ind.; A. A. Stambaugh, vice president Standard Oil Company of Ohio, Cleveland; Harry J. Kennedy, vice president, Continental Oil Company, Ponca City.

District 3—(Southwestern States)

General Committee: Charles F. Roeser (chairman), Roeser & Pendleton, Fort Worth, Texas; George A. Hill, Jr., president, Houston Oil Company, Houston; John W. Newton, vice president, Magnolia Petroleum Company, Beaumont, Texas; Roy B. Jones, president, Panhandle Producing & Refining Company, Wichita Falls; H. C. Wiess, president, Humble Oil & Refining Company, Houston.

Production Committee: George A. Hill, Jr. (chairman), president, Houston Oil Company, Houston; John R. Suman, vice president, Humble Oil & Refining Company, Houston; J. C. Hunter, J. C. Hunter and H. L. Graham, Abilene, Texas; A. A. Seeligson, president, Trans-Western Oil Company, San Antonio; J. C. Bridwell, president, Bridwell Oil and Gas Company, Wichita Falls; B. A. Hardey, chairman, Louisiana Mineral Board, New Orleans; Van S. Welch, Flynn, Welch and Yates, Artesia, New Mexico; T. H. Barton, president, Lion Oil Refining Company, El Dorado, Ark.; J. S Russell, assistant vice president, Gulf Oil Company, Houston; J. S. Abercrombie, Abercrombie and Harrison, Houston.

Refining Committee: John W. Newton (chairman), vice president, Magnolia Petroleum Company, Beaumont; Hines H. Baker, vice president, Humble Oil & Refining Company, Houston; Frank Holsten, executive vice president, Chalmette Petroleum Corporation, New Orleans; Fred Dodge, general superintendent, The Texas Company, Houston; Parker Kendall, refinery superintendent, Sinclair Refining Company, Houston; Raymond Tollett, president, Cosden Petroleum Corporation, Big Spring, Texas; D. P. Hamilton, president, Root Petroleum Company, Shreveport, La.; Kent W. Bartlett, president, Amsco Refining Company, Corpus Christi, Texas; M. E. Baish, president Malco Refining Company, Artesia, New Mexico; M. J. Rathborn, president, Standard Oil Company of Louisiana, New Orleans.

Transportation Committee: H. C. Wiess (chairman), president Humble Oil & Refining Co., Houston; T. E. Swigart, president, Shell Pipe Line Co., Houston; J. L. Latimer, vice president, Magnolia Pipe Line Co., Dallas; E. C. Kincade, vice president, Gulf Refining Co., Houston; J. H. Wood, Jr., vice president, Atlantic Pipe Line Co., Dallas; R. W. Pack, vice president, Sun Pipe Line Co., Beaumont; Charles Fitzgerald, assistant vice president, Sinclair Refining Co., Pipe Line Dept., Fort Worth; Burt Hull, president, The Texas Pipe Line Co., Houston; G. L. Rowsey, president, Taylor Refining Co., Taylor, Texas; Maston Nixon, vice president, Southern Minerals Pipe Line Co., Corpus Christi.

Marketing Committee: Roy B. Jones (chairman), president, Panhandle Producing & Refining Co., Wichita, Falls; C. B. Barrett, sales manager, The Texas Co., Houston; O. B. Carlisle, sales manager, Gulf Oil Co., Houston; George Miller, vice president, Magnolia Petroleum Co., Dallas; G. M. Gordon, vice president, Standard Oil Co. of Louisiana, New Orleans; A. F. Buck, sales manager, Sinclair Refining Co., Ft. Worth; J. R. Parten, chairman of board, Premier Oil Refining Co., Houston; A. F. Reed, vice president, Lion Oil Refining Co., El Dorado, Ark.; Mason Houghland, Nashville, Tenn.; H. S. Lane, vice president, Crown Central Petroleum Corp., Houston.

District 4—(Rocky Mountain)

General Committee: W. H. Ferguson (chairman) vice president, Continental Oil Co., Denver, Colo.; R. S. Shannon, president, Minnelusa Oil Corp., Denver; Henry Molye, president, Wasatch Oil and Refining Co., Salt Lake City, Utah; Burton W. Musser, general counsel, Utah Oil Refining Co., Salt Lake City; H. E. Clack, president, Clack Oil Co., Havre, Mont.

Production Committee: R. S. Shannon (chairman), president, Minnelusa Oil Corp., Denver; John F. Cullen, general superintendent, Rocky Mountain Oil and Gas Co., Casper, Wyo.; H. A. Stewart, general superintendent, Rocky Mountain states, The Texas Co., Denver; J. H. Moroney, superintendent land department, Rocky Mountain states, Sinclair Wyoming Oil Co., Casper; W. M. Holland, division manager, Ohio Oil Co., Casper; A. B. Cobb, A. B. Cobb and Co., Cut Bank, Mont.; Geo. N. McCabe, vice president Antarita Oil Co., Cut Bank; V. M. Kirk, independent, Frannie, Wyo.; E. J. Sullivan, president, E. T. Williams Oil Co., Casper; Arthur E. John, president, Argo Oil Co., Denver.

Refining Committee: Henry Moyle (chairman), president, Wasatch Oil and Refining Co., Salt Lake City; F. W. Bird, president, Glacier Production Co., Butte, Mont.; H. E. Cotton, superintendent, Standard Oil Co., (Indiana), Casper; H. S. McCray, superintendent, The Texas Co., Sunburst, Mont.; L. L. Smith, superintendent, Continental Oil Co., Denver; M. H. Robineau, president, Frontier Refining Co., Cheyenne, Wyo.; Don Hagerman, general manager, Independent Refining Co., Laurel, Mont.; D. O. Gray, president, Gray Refining Co., New Castle, Wyo.; E. L. Allen, president, Arrow Oil and Refining Co., Lewiston, Mont.; P. N. Fortin, vice president, Yale Oil Corp., Billings, Mont.

Transportation Committee: Burton W. Musser (chairman), general counsel, Utah Oil Refining Co., Salt Lake City; R. B. Hamilton, Stanolind Oil and Gas Co., Midwest, Wyo.; H. H. Healty, attorney, Ohio Oil Co., Casper, Wyo.; Edgar H. Rust, president, Colorado Petroleum Co., Denver; Clyde Parrish, superintendent Sinclair Wyoming Oil Co., Casper; R. V. Rodman, vice president, Bay Petroleum Co., Denver; L. B. O'Neil, Northwest Refining Co., Cut Bank, Mont.; Glenn Nielson, president, Husky Refining Co., Cody, Wyo.; J. B. Bruso, traffic department, Continental Oil Co., Denver; L. R. Hawley, president, Big West Oil Co., Spokane, Wash.

Marketing Committee: H. Earl Clack (chairman), president, Clack Oil Co., Havre, Mont.; M. J. Greenwood, vice president, Utah Oil Refining Co., Salt Lake City; F. J. Meine, division manager, Sinclair Refining Co., Denver; G. W. Schwert, division manager, The Texas Co., Denver; A. W. Yeates, vice president, Wasatch Oil and Refining Co., Salt Lake City; J. A. Lentz, regional manager, Continental Oil Co., Denver; H. W. Orchard, sales manager, Fletcher Oil Co., Boise, Idaho; J. H. Payne, vice president The California Oil Co., Denver; Frank C. Fogarty, sales manager, Home Oil and Refining Co., Great Falls, Mont.; W. E. Thomas, president, Navy Oil and Gas Co., Denver.

District 5—(West Coast)

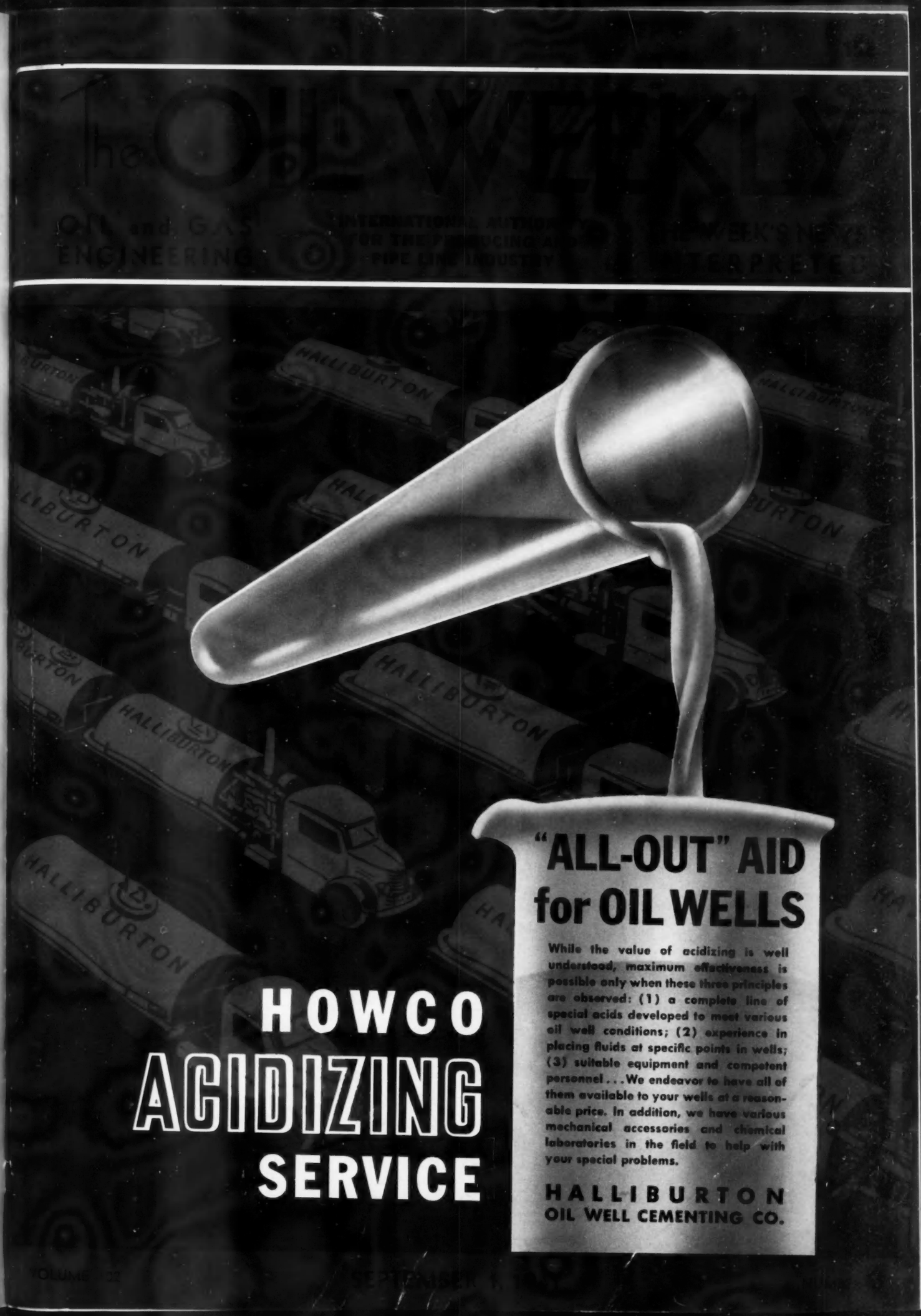
General Committee: A. L. Weil (chairman), Los Angeles; E. E. Pyles, vice president, Hancock Oil Co., Long Beach; W. L. Stewart, vice president, Union Oil Co., Los Angeles; C. S. Jones, president, Richfield Oil Corp., Los Angeles; C. S. Beesemyer, vice president, Gilmore Oil Co., Los Angeles.

Production Committee: E. E. Pyles (chairman), vice president, Hancock Oil Co., Long Beach; Wm. Keck, vice president, Superior Oil Co., Los Angeles; Laurence Vander Leck, vice president, Fullerton Oil Co., Los Angeles; L. L. Aubert, manager, Bankline Oil Co., Los Angeles; A. D. Mitchell, independent, Long Beach; L. A. Cranson, vice president, Honolulu Oil Corp., San Francisco; F. S. Bryant, director, Standard Oil Co. of Calif., San Francisco; L. P. St. Clair, oil administrator, California Conservation Committee, Los Angeles; E. F. Davis, vice president, Shell Oil Co., Los Angeles; R. E. Collom, vice president, Continental Oil Co., Los Angeles.

Refining Committee: W. L. Stewart (chairman), vice president, Union Oil Co., Los Angeles; L. R. Holmes, vice president, The Texas Co. (California), Los Angeles; J. L. Hanna, vice president, Standard Oil Co. of Calif., San Francisco; O. C. Field, president, O. C. Field Gasoline Corp., Los Angeles; H. S. Rothschild, president, Rothschild Oil Co., Santa Fe Springs; E. V. McKenzie, president, Mohawk Petroleum Co., San Francisco; F. S. Clulow, vice president, Shell Oil Co., San Francisco; L. F. Bayer, vice president, Tidewater Associated Oil Co., San Francisco; Maurice A. Machris, vice president Wilshire Oil Co., Los Angeles.

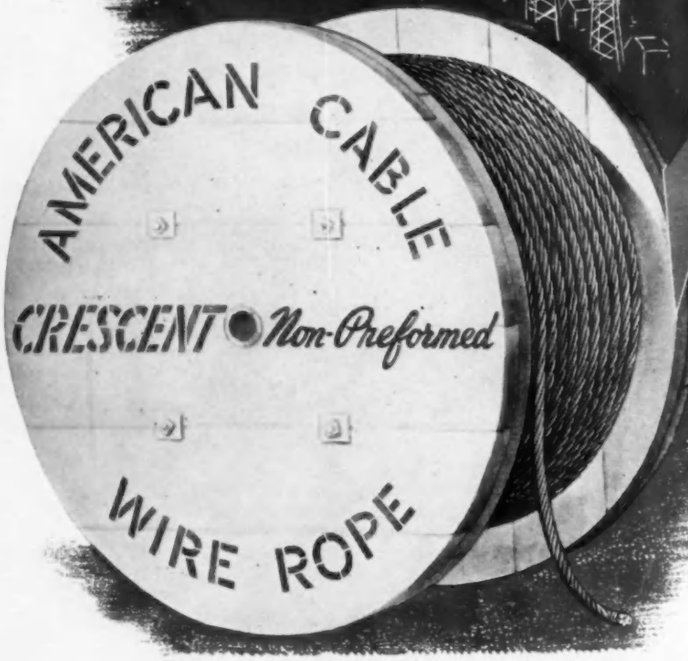
Transportation Committee: C. S. Jones (chairman), president, Richfield Oil Corp., Los Angeles; C. P. Watson, vice president, Seaboard Oil Co., Los Angeles; A. S. Russell, vice president Standard Oil Co. of Calif., San Francisco; A. C. Rubel, vice president, Union Oil Co., Los Angeles; R. L. Minckler, director, General Petroleum Co., Los Angeles; Harold Pauley, vice president, The Petroleum Corp., Los Angeles; Torrey H. Webb, vice president, The Texas Co. (California) Los Angeles; R. D. Mathews, president, Pacific States Oil Co., Los Angeles; D. F. Gerstenberger, manager, Inland Empire Refineries, Spokane, Wash.; A. C. Saul, assistant to vice president, Shell Oil Co., San Francisco.

Marketing Committee: C. S. Beesemyer (chairman), vice president, Gilmore Oil Co., Los Angeles; O. W. March, vice president, Signal Oil Co., Los Angeles; J. H. MacGaregill, director, Standard Oil Co. of Calif., San Francisco; H. D. Maxwell, Maxwell Petroleum Corp., Tacoma, Wash.; W. T. Dinkins, vice president, Richfield Oil Corp., Los Angeles; L. G. McLaren, vice president Shell Oil Co., San Francisco; P. E. Allan, sales manager, Tidewater Associated Oil Co., San Francisco; B. E. Devere, executive vice president, Pathfinder Petroleum Co., Los Angeles; Dewitt Knox, vice president, MacMillan Petroleum Corp., Los Angeles; Walter H. Nielsen, dealer, Los Angeles.


HALLIBURTON
"ALL-OUT" AID
for OIL WELLS
While the value of acidizing is well understood, maximum effectiveness is possible only when these three principles are observed: (1) a complete line of special acids developed to meet various oil well conditions; (2) experience in placing fluids at specific points in wells; (3) suitable equipment and competent personnel . . . We endeavor to have all of them available to your wells at a reasonable price. In addition, we have various mechanical accessories and chemical laboratories in the field to help with your special problems.
HALLIBURTON
OIL WELL CEMENTING CO.
HOWCO
ACIDIZING
SERVICE

FOR Rotary Drilling

• Ever since **TRU-LAY Preformed Rotary Lines** were first introduced [illegible] more drillers have learned that [illegible] interruptions to drilling and [illegible] ier operation—TRU-LAY [illegible] the answer. The big operators who keep accurate records of rotary line service and expense [illegible] for a long time. But [illegible] big or small operator—TRU-LAY Preformed every*where* shows its superiority. Specify [illegible] for your next [illegible]



FOR Cable Tool Drilling

• If your [illegible] is a cable tool job, specify American Cable's **CRESCENT Non-Preformed Lines.** They have long proved themselves so uniformly high in enduring quality over a long period of years in all fields that today thousands of operators, big and small, depend upon CRESCENT Lines exclusively. They long since have learned that reel after reel of CRESCENT Non-Preformed Lines are absolutely uniform in both metal and manufacturing quality and in drilling service.

The American Cable Division maintains large stocks of all kinds of wire drilling lines in principal distributor warehouses and at district office warehouses located in all principal fields. American Cable's delivery service is immediate and accurate. All American Cable ropes made of improved plow steel are identified by the Emerald Strand.

AMERICAN CABLE DIVISION
WILKES-BARRE, PENNSYLVANIA
Branch Offices and Distributors in All Oil Field Centers

AMERICAN CHAIN & CABLE COMPANY, Inc.

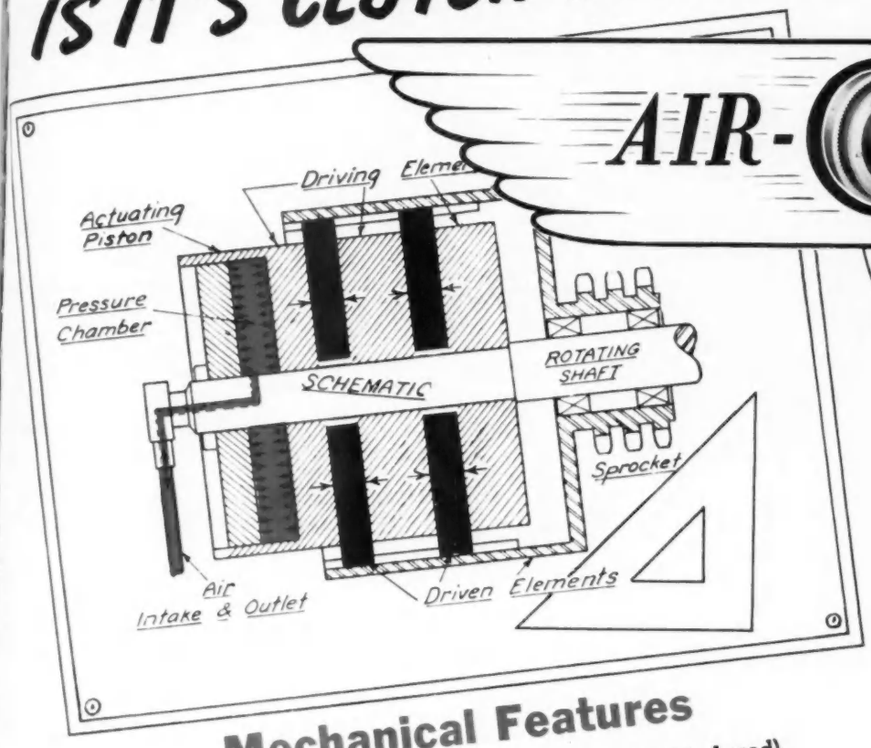
ESSENTIAL PRODUCTS . . . AMERICAN CABLE Wire Rope, TRU-STOP Emergency Brakes, TRU-LAY Control Cables, AMERICAN Chain, WEED Tire Chains, ACCO Malleable Iron Castings, CAMPBELL Cutting Machines, FORD Hoists and Trolleys, HAZARD Wire Rope, Yacht Rigging, Aircraft Control Cables, MANLEY Auto Service Equipment, OWEN Springs, PAGE Fence, Shaped Wire, Welding Wire, READING-PRATT & CADY Valves, READING Electric Steel Castings, WRIGHT Hoists, Cranes, Presses . . . *In Business for Your Safety*

THE HEART OF A RIG IS IT'S CLUTCH SYSTEM-

UNIT RIG

AIR-O-MATIC Clutches

for Safety



Mechanical Features

- Only one actuating part.
- Air Cooled (self induced).
- Equalized Pressure on All Driving Parts.
- Torque Controlled — Definitely (This is important for Rotary Drive).
- Self Compensating for wear of friction elements.
- Self Cleaning.

Operation Features

- Finger Tip Control.
- Powerful.
- Flexible.
- Cushion Engagement.
- Durable and Safe.

. . . As a result of actual field experience UNIT RIG developed the AIR-O-MATIC CLUTCH — to eliminate clutch trouble. AIR-O-MATIC CLUTCHES make double clutching unnecessary and eliminate grabbing and shock. There are no toggles or pins to wear and adjustments are absolutely eliminated.

Safe as a locomotive air brake!

See Composite Catalog and Petroleum Equipment Directory for further details.

BUY UNIT RIG EQUIPMENT THRU YOUR FAVORITE SUPPLY COMPANY or EXPORT AGENT-

UNIT RIG & EQUIPMENT CO.
TULSA OKLAHOMA U.S.A.

U. S. Army Twin-engine Medium Bomber — combines long range and large bomb capacity with high speed.

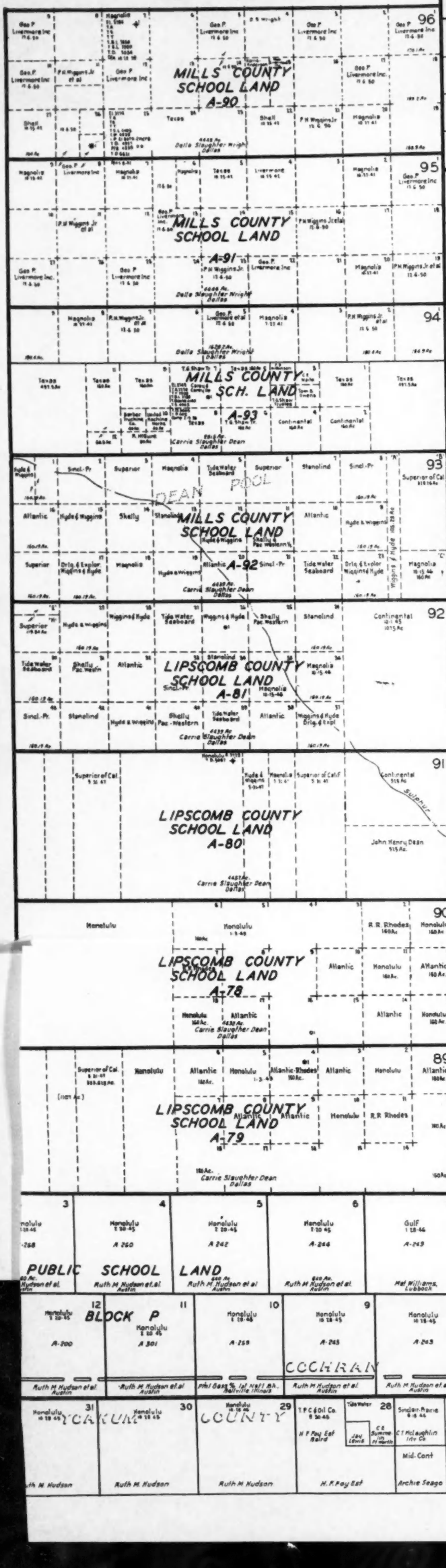
Distance, Speed, Load Capacity . . . Requisites of Bombers and Rock Bits!

Judged by how far it will fly, how fast it will fly, and the bomb load it will carry, the above U. S. Bomber is "tops" in its field.

Those same words fittingly describe the performance of Hughes Rock Bits: speed in making hole, feet of hole per bit, and strength to carry the weight necessary for maximum cutting speed. In the constant search for oil, Hughes Rock Bits in the ground help keep the U.S. Bombers in the air.

Hughes Tool Company · Houston

Supplement to
THE OIL WEEKLY
August 4, 1941



MIDLAND COUNTY SCHOOL LAND
A-61
A Battenfield Whiteface

MARTIN COUNTY SCHOOL LAND
A-57
Della Slaughter Wright

WHITEFACE

MIDLAND COUNTY SCHOOL LAND
A-59
Byron Phillips Whiteface
Imogene W. May Gainesville, Tex.
Callie Piercy

A-173
McWhorter & Whaley

MIDLAND CO. SCHOOL LAND
A-174
J. H. Silvey
McWhorter & Whaley
Earl Stone Overton

MARTIN COUNTY SCHOOL LAND
A-56
Della Slaughter Wright

MARTIN COUNTY SCHOOL LAND
A-58
Della Slaughter Wright
Carrie Slaughter Dean

COCHRAN HOCKLEY

EDWARDS COUNTY SCHOOL LAND
A-162
Mallett Land & Cattle Co. Abernathy

MARTIN COUNTY SCHOOL LAND
A-54
2077.9 Ac
Carrie Slaughter Dean

REPUBLIC COUNTY SCHOOL LAND
A 68

MARTIN COUNTY SCHOOL LAND
A-55

OLDHAM COUNTY SCHOOL LAND
A-67
Mrs. F. L. Woodley

EDWARDS COUNTY SCHOOL LAND
A-164
Mallett Land & Cattle Co. Abernathy

OLDHAM COUNTY SCHOOL LAND
A-66
H. T. Boyd
Igoe & Smith
Geo. P. Livermore Inc
Ferdinand Moore et al

SCURRY COUNTY SCHOOL LAND
A-186
Mallett Land & Cattle Co. Abernathy

OLDHAM COUNTY SCHOOL LAND
A-64
Ferdinand Moore et al. Sherman, Texas.

OLDHAM CO. SCH. LAND
A-63
Mallett Land & Cattle Co. Abernathy

SCURRY CO. SCH. LD.
A-332
Mallett Land & Cattle Co.

SCURRY COUNTY SCHOOL LAND
A-184
Mallett Land & Cattle Co. Abernathy

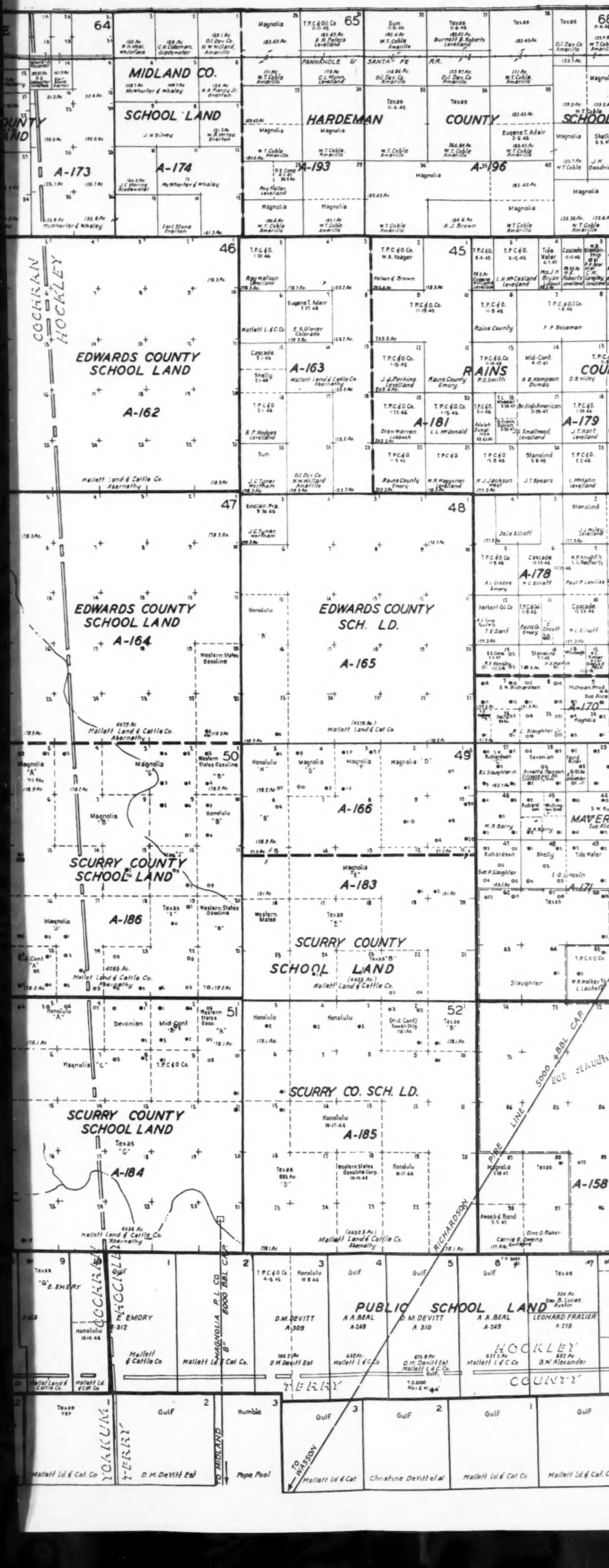
PUBLIC SCHOOL LAND
BLOCK G.
COUNTY

A-247 A-246 A-240 A-241 A 268 A-269 A 267 A 163

MAGNOLIA P.L. CO. 6000 BBL. CAP.

Mallett & Cattle Co

TO MIDLAND


64
MIDLAND CO.
SCHOOL LAND
A-173
A-174
HARDEMAN
COUNTY
SCHOOL
A-193
A-196
46
EDWARDS COUNTY
SCHOOL LAND
A-162
COCHRAN
HOCKLEY
A-163
45
RAINS
A-181
A-179
47
EDWARDS COUNTY
SCHOOL LAND
A-164
48
EDWARDS COUNTY
SCH. LD.
A-165
A-178
A-170
50
SCURRY COUNTY
SCHOOL LAND
A-186
49
A-166
A-183
SCURRY COUNTY
SCHOOL LAND
51
SCURRY COUNTY
SCHOOL LAND
A-184
SCURRY CO. SCH. LD.
A-185
52
A-158
A-171
5000 BBL CAP. PIPE LINE
RICHARDSON
PUBLIC SCHOOL LAND
E. EMORY
A-312
D.M. DEVITT
A-309
A.A. BEAL
A-248
D.M. DEVITT
A-310
A.A. BEAL
A-249
LEONARD FRAZIER
A-218
HOCKLEY COUNTY
MAGNOLIA P.L. CO. 8" 6000 BBL CAP.
TO MIDLAND
TO WASSON
YOAKUM
TERRY

MAP OF

SLAUGHTER POOL

COCHRAN & HOCKLEY COUNTIES, TEXAS

SCALE 0 1/4 1/2 3/4 1 MILE 2 MILES

SOUTHWEST MAPPING COMPANY,

FORT WORTH, TEXAS.